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THE

# DENTAL NEWS LETTER.

A QUARTERLY PUBLICATION.

VOLUMES ~~I.~~, II. AND III. **IV. V**

JONES, WHITE & McCURDY,  
PUBLISHERS AND PROPRIETORS,

120 ARCH STREET, PHILADELPHIA, AND 263 BROADWAY, NEW YORK.



THE

# DENTAL NEWS LETTER.

A QUARTERLY PUBLICATION

VOLUME II AND III

JONES, WHITE & MCLROY  
PUBLISHERS AND PROPRIETORS  
100 N. 3RD ST. NEW YORK

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# THE DENTAL NEWS LETTER.

Vol. II.

OCTOBER, 1848.

No. 1.

For the Dental News Letter.

## PLUGGING TEETH.

*Messrs. Jones, White & Co.*

GENTLEMEN—Agreeably to request, I will endeavor to furnish you with as concise a description of plugging teeth with gold as my time and abilities will allow.

As this operation is of ancient origin, and is practised to a much greater extent at the present day than at any other known period of the world, it is a sufficient reason that we should bestow upon it all our talents and energies; and that it is the most important branch of duty which engages the attention of the dental practitioner, no one will, I believe, for a moment doubt.

My remarks will be entirely confined to the use of gold as a substance for plugging, as I do not wish for a moment to engage in the storms of controversy which have extended over our whole country of late years, with reference to the use of the compounds of the baser metals and amalgum. Various as have been the descriptions of this operation by authors, there are none, as far as I have seen, that will enable the young practitioner to produce a very satisfactory result, and very few agree with regard to the manner in which it should be done.\*

There is no art, the mechanical execution of which affords a wider scope for a display of dexterity and gracefulness of manipulation than that of plugging teeth; for it is literally making a workshop of the mouth; and to approach a highly sensitive patient in a slovenly and bungling manner, must of necessity be rendering an unpleasant operation at best, really distressing and painful; hence many preparatory requisites, apart from the mere instruments used in plugging, are highly necessary. It is presumed that the patient is seated in a suitably constructed chair, for the maintenance of an easy posture in any desirable position—desirable as well for the operator as the patient; this is indispensable for the proper execution of any operation upon the teeth. Every patient should be supplied in the first place with a clean napkin, a glass of water, and spittoon within convenient reach. Many remark that the water should be tepid, but this is not often requisite; water of the temperature of the operating room is generally

\* I wish to be understood as writing for the young, and not for the old.



most suitable, because the friction upon the teeth by the filing, scraping, &c., fevers them more or less, and cool water is more advantageous than otherwise, as it is refreshing, and keeps down vascular congestion of the teeth and gums; if a highly sensitive tooth is prepared for plugging, merely filling the cavity with a pledget of cotton will prevent a thrill of pain to the patient while rinsing the mouth, while lukewarm water favors a determination of blood to the mouth, and promotes a relaxation of the parts generally. The operator should invariably wash his hands and instruments before examining the teeth of a patient, to avoid unpleasant associations relative to cleanliness; this simple neglect may give the patient a disgust to every thing that he may do thereafter. There is no point upon which a patient is more sensitive than this. He must never approach a patient without a napkin in his own hand also, because he should have the convenience of wiping every dampness of the saliva from his fingers, and any substance from his instruments that may get upon them during an examination of the teeth.

*Preparation of the Cavity.*—First determine as nearly as possible the depth of the cavity, with a view to the reduction of its margins, (I have reference here to the cavities on the approximal surfaces of the teeth,) and for this purpose the file is the most useful instrument,\* which should be of various construction to suit the different localities of the teeth; for the front teeth the usual separating file cut upon both sides may be used when it is desirable to reduce an equal portion of each tooth, but when one tooth is decayed and the other sound, a file cut upon one side only is generally most suitable, because we cannot only avoid, if we wish, cutting away the sound tooth, but the smooth side of the file can be depressed against it, so as to cut away more of the affected tooth upon the posterior part than upon the anterior; an effect which is always desirable, in order that the separation shall be much wider upon the back parts of the teeth than upon the front; for two important reasons, first, that the plug may face backwards to obscure it from view, and secondly, that in the act of biting into any substance of food, it will glide upwards and outwards upon the inclined plane which the surface of the plug and tooth will present, as that is the direction of the motion of the inferior maxilla when biting with the front teeth; in this way the plugged surface is constantly kept clean; to face the surface of the plug outwards by a careless use of the file is inexcusable, when it can be avoided. It is in almost all cases desirable to reduce one-half of the enamel of the sound tooth so as to make the approximal surfaces as nearly equal in appearance as possible, and that sufficient projection shall be left along the lower boundary of the cavity near the necks of the teeth to prevent the filed and

\* As the file becomes warm, as well as the teeth, of course it should be kept wet and cool, by frequently dipping it into cool water

plugged surfaces from ever touching again. It is frequently desirable to file the posterior margin of the cavity concave; for this purpose, a thin file with an oval cut, and a flat, smooth surface, is indispensable, because the smooth surface can be depressed against the anterior margin of the adjacent tooth, so that the oval surface will cut away the posterior margin of the affected one in a concave manner; I mean that the convex side of the file shall not touch the front parts of the teeth, unless they are much decayed. Looking from behind forwards, the separation should present the view of an abrupt termination of a cone, instead of a square notch or slit, which a file with two parallel surfaces is calculated to produce. As the enamel is thinner on the back parts of the teeth than the front, and frequently breaks away before decay is observed by the patient, this method of filing is frequently indispensable.\* I do not wish to be understood that the front view of the separation between the front teeth shall also be of a cone shape;† yet they should be filed away sufficiently to remain slightly separate. If they should fall together at their cutting edges in a few months after they have been filed, then separate a little more, for the teeth will often decay between the plugs and cutting edges. In some few cases where there is a great disproportion between the breadth of the cutting edges and the necks of the teeth, back as well as front, which, when they are decayed near the gum, it would be impossible to file away the cutting edges sufficiently to allow the necks resting together; in such cases it is not common for the teeth to decay near their coronal‡ extremities, and when they are not decayed, they should not be filed, but should be plugged, and a tape or piece of silk daily passed between them in order to keep the teeth and plugs clean. With reference to the bicuspid and molar teeth, a similar rule for filing to that of the front teeth should be observed, except that the separation should present a shape resembling a cone with its apex towards the necks of the teeth, for which purpose a file of similar shape should be used, as well as a file resembling the letter V,§ and be certain to cut away sufficient of the coronal extremities of the teeth to ensure a continued separation, and sufficient of the enamel of the face|| of the tooth, to prevent it breaking away by mastication after the cavity is plugged. Very frequently the facial margin of the cavity opposite the middle of the crown must be dressed in a concave line, running from the lingual to the buccal

\* The filed surface of a tooth should never terminate at an angle near the neck, but on the contrary it should terminate at nothing, in order that every portion of the exposed bone should be covered with the gold, so that in cleaning with a tape it will touch all parts of the plug and tooth.

† It should be the constant study of the operator in filing the front teeth to preserve their natural symmetry as much as possible.

‡ I shall use this term to indicate the cutting edges and prominences of all the teeth.

§ The files here mentioned can be procured at Mr. Murphy's, No. 110 north Fourth st.

|| I shall use this term to designate the grinding surfaces of the molar teeth.



extremity of the tooth, as the enamel is more brittle, imperfect, and thin, corresponding with the crevices or cliffs of the faces of the teeth, than at its coronal extremities. The most important principle to be observed is, that the teeth be filed sufficiently to prevent breaking away after they are plugged, and present an inclined plane facing towards the opposite jaw.\*

Another very useful instrument is a kind of chisel, similar to a joiner's small paring chisel, slightly bent, so as to bring the edge in contact with the tooth with facility. Some should be constructed with the edge parallel with the shaft of the instrument, similar to a strong gum lancet. These instruments made small are indispensable for opening the facial cavities, because the openings are often mere crevices or fissures, and the enamel being very hard, a blunt burr drill will not enter very well, yet this form of drill is often invaluable, and any kind of a flat drill will become bound between the opposite margins of the cavities, and give great pain in attempting to rotate it. A small and pointed triangular drill will often be useful when the openings are very small, and triangular scrapers of different sizes are also requisite.† As the direction of the enamel fibre is from the surface of the tooth to its centre, of course its cleavage is in that direction, and the chisel leaves a thin and oblique margin to the cavity of decay, which must be reduced by the file, as a straight, thick and strong margin is necessary to fit the plug to.

If the foregoing papers meet with your approbation, gentlemen, I will be pleased to continue the subject in your next number, and speak of the further preparation of the cavity characteristics of decay, the instruments used in plugging, &c. &c.

J. D. WHITE, M. D.

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For the Dental News Letter.

## A CASE OF THE PRODUCTION OF A THIRD TOOTH.

Perhaps there is nothing more remarkably illustrative of the *recuperative powers of Nature*, than the production at a late period of life, of a *third set of teeth*. Many instances of this kind are related by dental writers. But the following, of a somewhat different character, may perhaps be new to most of your readers.

A gentleman now residing in this place, Mr. S. M., when about three or four years of age, had by accident the right central incisor knocked out with the point of a pitchfork. In the course of two or three months afterwards, another tooth, rather stubby and abnormal in appearance presented itself, which grew down and

\* Many are in the habit of separating the teeth with cotton, India rubber, soft wood, &c., but it is as unsuccessful as it is unphilosophical. If the decay of the teeth is at all favored by contact, then the practice is unsound.

† The kind of scrapers here alluded to can be obtained at Mr. H. G. Kerns', No. 293 Market street.

supplied the place of its predecessor. It was afterwards, by due course of absorption and shedding, replaced by the present very beautiful *permanent* tooth.

Now the question arises, was the *secondary* deciduous tooth an *entire new production*, on the part of Nature, to supply the deficiency? or are we to seek for some other solution of the matter? In other words, can a *deciduous tooth*, under any circumstances, be reproduced by the restorative powers of Nature, when its fang and pulp have been entirely removed? In this case, it certainly appears to have been done; and the opinions of experienced physiologists on the question, would be very desirable.

JAMES FLEMING, M. D.

Harrisburg, Pa.

For the Dental News Letter.

## IRREGULARITY OF THE TEETH.

Messrs. Jones, White & Co.

GENTLEMEN—Allow me through the medium of your valuable pages, to offer for the perusal of the Profession, the following interesting case of *Irregularity* in permanent teeth, which came under my notice nearly three years ago. The drawing is from a cast of the mouth taken at that time. It has recently been copied by means of the Daguerreotype to insure its fidelity.



I will briefly relate the history of the case. G. S., an intelligent lad of fifteen, was brought to my office by some of his friends, for whom I had performed various dental operations. My attention was directed to his so called set of *double teeth*. The strange appearance of his mouth, caused me to inquire into details, which even at first sight I could hardly

fail premising. The head of an extraordinarily large size, and the general strumous diathesis of the patient, sufficiently indicated that a strong force had opposed nature in her beautiful regularity.

From his earliest infancy until the age of fourteen, George had been afflicted with dropsy in the head, and having accidentally, at eighteen months, broken off his incisors close to the gums, the roots soon decaying were extracted; leaving a vacancy in the middle of his upper dental arch, which was not filled by his permanent incisors until he was fourteen. In the mean time the alveolar process seemed to have become absorbed, quite as much as in a



subject far advanced in years, and formed anteriorly a deep cavity into which his upper lip sank, giving a peculiar expression to his features.

To this apparent absorption and condensation of the alveolar, do I attribute the scattering and irregular growth of his second dentition, which likewise may be accounted for, by his being so early deprived of his deciduous incisors, and being afflicted as I have stated.

These irregular teeth, to the number of three, being all very much decayed, I extracted, as well as the left central incisor. The gums healed very promptly. At the present time, the anterior depression in the alveolar is entirely filled up, the gums have not shrunk, and his mouth is restored to a normal appearance—as will be seen by looking at the cut, the two ill-shaped teeth in the median line grew in the place occupied by his deciduous central incisors and were consequently an *extra* pair provided by nature to retrieve his early loss.

Tout a vous,

CHAS. A. DU BOUCHET.

Philadelphia, Oct. 2, 1848.

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For the Dental News Letter.

### IRREGULARITY OF THE TEETH.

An interesting case of irregularity, arising from the presence of supernumerary teeth, came under my notice a few weeks since. A lady of perhaps twenty-three or four years of age, consulted me concerning a slight neuralgia which had affected the right side of her face and head for some weeks. On examining her mouth, I found a full set of well developed, fine looking teeth. The *dens sapientiæ* on the left side of the mouth, was of the usual size, and formed more like the 1st and 2d molars than is generally the case. Close beside it on its interior surface, but entirely disconnected from it was a small tooth of the thickness of a large straw, of a conical shape, with a slight indentation in its grinding surface. At the right side of the mouth the *dens sapientiæ* was small and did not occupy more than half the room, laterally, of the adjoining molar, but its outer surface was on a range with the anterior of the arch, at its inner side, in the angle formed by it and the 2d molar, a small tooth similar to the one on the left side, was making its appearance. From the inflammation and other symptoms attending it, I had no doubt that it was the cause of the pain.

I also met with a case lately in which there were five superior incisors, the two central, one right lateral and two left lateral, both so well developed in shape and color that it was impossible to tell which was the usurper, the adjacent teeth were all present, and completely in the line of the arch.

C. N. HICKOK, Dentist.

Bedford, Pa.

Reported for the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

The Society met at 7½ o'clock, at the Hall of Pharmacy, Oct. 3, 1848. President, Dr. E. PARRY, in the Chair, and Mr. A. R. JOHNSON, Secretary.

Minutes previous meeting read and adopted.

Treasurer's report now read, and a Committee appointed to audit, who reported a very favorable state of the finances.

Chairman of the Examining Committee handed in a committee report in favor of receiving Mr. W. R. White into membership.

The Committee to whom was referred *Lawrence's Tongue Holder*, reported through their Chairman, Dr. J. D. White, as follows:

## REPORT OF COMMITTEE ON LAWRENCE'S TONGUE HOLDER.

*To the President and Members of the Pennsylvania Association of Dental Surgeons:*

GENTLEMEN—Your Committee appointed to investigate the merits of Lawrence's Tongue Holder, respectfully beg leave to announce that they have attended to that duty. The Committee, therefore, respectfully report, that as far as they have tried it, they find it to be very useful in many prolonged operations in plugging the teeth, as an assistant in keeping away the tongue and saliva; but on account of its depressing the tongue too much, in many cases, and forcing it against the fauces, and producing nausea, it is not as useful in general practice as was at first anticipated by your Committee; still there are many instances in which it will be found to be almost indispensable. While every compliment is due to Mr. Lawrence for the very liberal manner in which he has laid it before your Committee, yet, they would be doing injustice to a highly respectable French author, M. Desirabode, (who has used and described the same contrivance precisely, as will be observed by a reference to page 262 of the American Library of Dental Science, for 1847,) if they were to regard the principle of Mr. Lawrence's apparatus as anything more than identical with M. Desirabode's. However, the Committee do not wish to be understood as believing that Mr. Lawrence did not invent it without the knowledge of its former existence. The following is the description of the instrument as given by M. Desirabode: "The tongue may be kept out of the way by means of a fixture, made of two semi-elliptical plates of boxwood, ivory or platina, applied, one to the roof of the mouth, the other placed upon the tongue, and kept apart by a piece of whalebone, curved backwards and fixed by each end into sheathes made in the plates to receive them. The superior plate is terminated by an appendage which touches the posterior border of the alveoli and the teeth in order to make a projection out of the mouth, by



which the apparatus may be removed with facility and promptitude in cases where it forms an obstacle which cannot be immediately removed by the fingers."

*Resolved*, That a vote of thanks be awarded to Mr. Lawrence, for presenting the subject to the consideration of the Society. All of which is respectfully submitted.

Signed.

J. D. WHITE, M. D.

S. T. BEALE, M. D.

Mr. C. C. WILLIAMS.

The resolution was adopted.

Next in order was the report of the Committee on *Gilbert's Central Cavity Plate*:

*To the President and Members of the Pennsylvania Association of Dental Surgeons:*

GENTLEMEN—The Committee appointed by you to examine into the merits of "Gilbert's Patent Cavity Plate," respectfully beg leave to report that they have attended to the duties assigned them as far as in their judgment is necessary. With reference to the priority of invention of this plate, your Committee do not pretend definitely to report, inasmuch as numbers claim the originality from ten to fifteen years back; still, there does not seem to be any evidence of it, except their own assertions. However, some operators have constructed a plate with a number of chambers, and consider it to have been done for the same purpose, as the single chamber claimed by Gilbert, or in other words, that the invention of one is equivalent to the invention of the other, and that substituting one chamber for any number, does not entitle the modification to the credit of originality. Now inasmuch as Mr. Gilbert was the first (as far as your Committee are aware) to make the Cavity Plate public, he is entitled to the credit of the invention, so far as it subserves the public good, for we make no doubt that those who have been capable of confining it to the secrets of their own closets for fifteen years, would do so that much longer; however your committee will leave that part of the subject, believing that his patent papers will protect him against any unjust attacks from pretending claimants.

With regard to its practical uses, your committee would report, that in a great number of cases, it has been most markedly successful, and in cases, too, where springs had been unsuccessfully applied by different operators, and they believe also that this happy result has been from the use of the "Central Cavity Plate."

This central cavity seems to be a kind of "neutral ground" or reservoir, as well for atmospheric air as the elasticity of the gum, and it is well known that the alveolar process is constantly undergoing slight absorption until it entirely disappears, and, that when the plate extends over the entire surface of the hard palate,

it will sooner or later impinge with more force upon it, than upon the alveolar ridge, and produce a rocking motion of the artificial teeth, a difficulty which this central cavity in a measure prevents, and as there is some elasticity in the gum at all times, unequal pressure upon any part of the operation will produce a rocking motion even of a well-fitted plain plate or a plate with cavities upon opposite sides; the hard palate will act as a pivot upon the central part of a plain plate, from the yielding character of the gums over the alveolar process, and destroy the full influence of the atmospheric pressure in many cases. This cavity plate can be applied in a large number of cases for setting a single tooth, or an indefinite number, as the accompanying specimen will illustrate.\* It is an instance where two teeth have been injured by clasps, but which are now worn with entire comfort and usefulness. By an examination of a great number of cases which have been worn from four to seven months, and kept in the mouth constantly, (except while cleansing them,) no irritation of the hard palate was observable, or unpleasant consequences in any respect. In some few cases where it has not been entirely satisfactory, it seems to have resulted rather from an improper adaptation of the plate, condition of the mouth, or an inability of the patients to accommodate themselves to it, than a want of power in the plate; notwithstanding it is believed where springs have been applied, the cases are worn with greater usefulness than had the cavity not been used also.

*Resolved*, That a certificate of approval of the Central Cavity Plate, should be awarded Mr. Gilbert by this Society.

This was approved, and received the signatures of the officers of this Society.

Signed,	J. D. WHITE, M. D.	} Committee.
	S. T. BEALE, M. D.	
	ELY PARRY, M. D.	

On motion of Dr. J. D. White, a committee was appointed to report a plan for the establishment of a Cabinet and Library, for the Society. Drs. E. Parry, J. D. White, C. C. Williams, F. Reinstein and A. R. Johnson, the committee, with power to add.

An interesting debate here sprung up on the action where two metals are used in one filling, such as gold and tin, the saliva acting as a menstruum or medium, and where the baser metal is oxidized by exhalents and by imbibition through the bony structure of the tooth. Many facts were brought out, and much information obtained.

In conclusion, we may add, the right spirit is manifested by the members, and every thing bids fair to place the Society in that position, whence much good may be disseminated among the members.

M.

\* We saw the plate above referred to.—*Ed.*



## CARIES.

*Messrs. Jones, White & Co.*

In view of the various and distressing maladies to which caries gives rise, among which may be mentioned total destruction of the teeth, necrosis of the maxillary bones, odontalgia, fistula of the face, and enlargement of the lymphatic glands of the neck, aphthæ, ulceration of the mucous membrane of the mouth, and particularly of the tongue, to say nothing of the impairment of voice, destruction of beauty, the inability to masticate food, and hence that camelion malady, dyspepsia, together with the annoying diseases to which it gives rise, and their name is legion.

It is natural that the young and inquisitive mind should be anxious to get a good insight into the true nature and character of the disease called caries. It is for the above reasons that we are induced to make a few comments on an article that appeared in the January number of your journal on "Caries of the Teeth." After a careful and frequent perusal of the aforesaid article, we must acknowledge that we were unable to come to any conclusion as to the true definition of the term caries, or of the condition of the tooth he intended that term to express, for, the author observes that "Caries is an ulceration of the bone characterised by swelling, discharge of pus, peculiar odor," &c.; but immediately following, we are informed that the occurrence of this swelling, discharge of pus, peculiar odor, &c. never does occur, except when attended with inflammation of the pulp, therefore caries is not an ulceration of the bone, except under peculiar circumstances; then the first definition is not true; hence what are we to understand by caries? But probably the idea intended to be conveyed, is, that caries is an inflammation of the pulp, and this, as any other vascular body when inflamed becomes swollen, yet, even with this construction, we are equally as deep in the dark as ever, for how can an inflamed pulp be called a tooth? And such you must call it, if the above construction be taken, then caries cannot be an ulceration of bone, attended with swelling, &c., for one thing is certain that a tooth cannot swell; hence, then, we still press the question, and ask, what is caries?

Again, in paragraphs three and four, page eighteen, the writer unfortunately introduces experiments, by means of which he would appear to prove that a minimum quantity of acid is capable of bringing about that result or condition of a tooth, which on a previous page, he says, "like gangrene and mortification could be the result of nothing but inflammation." How this acid should be such a destructive agent to the teeth, is still a mystery to us. The author contends that it removes the enamel, which by no means necessarily gives rise to caries. We have seen many cases where it has been removed from the incisors, yet caries has

not supervened, and I presume our author is daily in the habit of removing it with his file, and no doubt with the honest conviction that so far from promoting the destruction of the tooth he arrests it.

It seems unreasonable to us that since the removal of the enamel by the file of the dentist, or by any other mechanical means does not produce caries, that a chemical agent can occasion it, certainly it can do no more.

Besides it is difficult to conceive how an acid having a greater affinity for the lime of the tooth than the phosphoric acid (and in fact there are but few, yea, very few such,) could remain in contact with the tooth in a state sufficiently concentrated to exert any chemical agency upon it. Again, the presence of acid or any acrid substance in the mouth always augments the secretion of the salivary glands, so that it becomes speedily diluted.

Again, in the last paragraph of page eighteen, there seems to be a renouncement of the position first assumed, viz.: that caries is always a result of inflammation—for it is there remarked that if it was “the crowning operation of the dentist (that of plugging) would never arrest its progress or preserve the tooth,” hence we are left to infer that caries is a condition of a tooth *not* the result of inflammation, but of the chemical action of acids, and I would be very happy to learn if the observations of the author have led him to this conclusion; for if so, magnesia would not only be an excellent remedy for acid dyspepsia, but it would supercede entirely, if taken in time, the intervention of the dentist.

After a thorough examination of the article, we can but exclaim in the language of another, “Oh! consistency, consistency, thou art a jewel!”

In conclusion, permit me to remark, that though much gratified while glancing over the above mentioned essay, to find that the author had placed a proper estimate upon the importance of his subject, I was not a little mortified to see that we should so soon be forced to lament that our friend had failed to place a sufficiently high estimate upon the importance of clearness and precision in the unfolding of his views as to make himself as explicit to his readers as he would appear to himself, for I must acknowledge the farther I proceeded, the more deeply was I plunged in the labyrinth of doubt and obscurity. Yet, unlike Dr. Johnson, I am unwilling to acknowledge that he has not a clear idea of his subject, because, forsooth, he should occasionally mistify; and hence it is, that I was induced to write the present article, with the earnest hope that the author might express himself or his views more clearly, concisely and pointedly, and this too, I do not so much on his account, as for the interest of beginners and inquirers into the subject.

R. R. PURYEAN,  
A Dental Student.



For the Dental News Letter.

### "HILL'S STOPPING."

Some of the many readers of the News Letter will doubtless feel interested in all the information they can obtain in relation to the success of this new article for stopping carious teeth. And what are its future prospects with the profession.

Having used it longer, and probably much more extensively than any other person, we propose to make a brief statement for the benefit of all who have any curiosity or interest in the matter, regarding the utility of this new compound.

First then, we would say, that every statement put forth in our circular, regarding its utility, is *strictly true*. Our first stoppings seem to be as good to-day, as when they were inserted. And our subsequent experience has given us the greatest assurance of success.

We have experimented extensively, in every variety of case that could command our attention, and we are free to affirm, that in *no* case, involving the character of this compound, has there been a failure. And this is the more remarkable, when we consider the circumstances under which it has been applied. We have sought the most desperate cases in which to test it, and have narrowly watched the result of our experiments, and the conviction is forced upon our own minds, that for *convenience, utility, and harmlessness* withal, it is *invaluable*,

We believe it to be more homogeneous with, and better adapted to the circumstances of decayed teeth, than any other stopping now in use. And the only question regarding it is, will it stand? To this we reply, *it does stand well* thus far, time only can determine its utmost durability. We have hopes regarding it, that we scarcely dare make public at the present time, but we think that a *fair* and impartial trial on the part of our professional brethren, of this compound will by no means diminish the prospect of their final consummation.

In addition to our own observation and experiments, we have the satisfaction to know, that *it is used, and recommended*, by some of the *ablest* and *most reputable* dental practitioners in the world. And we have received numerous letters from different parts of our country, and from men of high standing in the profession, saying all that we could ask in favor of our stopping. Consequently, our confidence increases with its use, and whatever our hopes may have been in times past, they are now stronger than ever before.

A. HILL, D. D. S.  
SAMUEL G. BLACKMAN.

Norwalk, Ct., September 26th, 1848.

For the Dental News Letter.

**EASY EXTRACTION.**

We recollect a case of easy extraction, at the thought of which we have had many a hearty laugh.

An old gentleman who was exceedingly timid, presented himself to a dentist for the purpose of having some four teeth removed, the fangs of which were so exhumed (if we may be allowed the expression,) that the thumb and finger alone were abundantly sufficient to accomplish the much dreaded operation. Still the dentist determined to play a little upon the old gentleman's feelings, and accordingly, with many asseverations that it would not pain him much, made a great display of forceps, lancets, elevators, punches and turnkey, showing him each and their mode of application. Then fixing the patient's head in a proper position proceeded to the operation of lancing the gums, which he just pressed with the lancet, not cutting them in the least, then applied the forceps and apparently exerted much power and force, giving considerable lateral motion although there was no strain whatever on the tooth, then with a sudden jerk removed the tooth, and so on until all were extracted.

The old gentleman rose from the chair much elated, and could not find words to express his gratitude for the skilful manner in which the almost painless operation had been performed.

The old gentleman's countenance—the dentist's display of force—and the running conversation which took place was altogether too much for our risibilities and we sloped. J.

For the Dental News Letter.

**LAWRENCE'S IMPROVED PORTABLE BLOW-PIPE.**

COMMUNICATED BY JOHN K. TOWNSEND, M. D., OF THIS CITY.

*Messrs. Jones, White & Co.*

I have just received from Mr. Henry Lawrence, now temporarily resident in Allentown, Pa., a most beautiful little bellows blow-pipe recently invented by him; which, for the perfection of its construction, the ease and facility with which it is used, its extreme portability, and though last, not least, its great cheapness compared with all others now in use, cannot, I think, fail highly to recommend it to dentists, and to any other persons whose occupation requires the use of such an implement.

The whole machine is but about nine inches long, eight inches wide, and six inches deep; and even these small dimensions may be contracted, if greater portability be desired, by removing certain portions of it; for every part of the blow-pipe, excepting the bellows, may be taken in pieces, and reunited in one minute's time.

It is, in brief, constructed as follows: A small double bellows is made, with a treadle for the foot fixed horizontally over it, to



one end of which a hinge is attached, the other being rendered stationary by a little hasp and staple. Instead of weights, the bellows is made to rise and fall upon the application of the foot to the treadle, by two springs of coiled brass wire properly attached to the machine. The air passes through a long, flexible tube, with a brass jet attached, by means of which the operator obtains a facility in the management of the flame which, in my opinion, alone renders this little instrument superior to any I have yet seen.

I feel assured, Messrs. Editors, that few dentists who have hitherto contented themselves with the common mouth blow-pipe, will fail to supply their laboratories with this simple and most effectual little machine, after they shall have witnessed the ease and certainty with which it performs its appropriate work. Its price also,—which I presume will not exceed one-third that of the ordinary bench blow-pipe,—taken in connexion with the superiority of its operation, must, I think, speedily induce a large majority of our dentists to adopt it so soon as it shall be offered for sale.

We have made arrangements for the manufacture of these blow-pipes, and hope, in the course of a week or two to be able to furnish them to the profession. JONES, WHITE & Co.

### CHLOROFORM IN CONVULSIONS OF INFANTS.

H. L. SABIN, WILLIAMSTOWN, MASS.

"I was called to a child, five months of age, who for nearly two hours had been laboring under most severe and unremitting convulsions. There was a constant spasmodic jerking of the muscles of the arm, together with the diaphragm and abdominal muscles. Respiration was much impeded, and there was strabismus of both eyes. The surface was growing more and more cold and livid, and a clammy sweat stood out upon the little sufferer's face and temples. As various antispasmodics had been tried without relief to the patient, I decided upon using chloroform. But a few inhalations were made before the eyes rolled up, the spasm of the muscles ceased, the breathing was free and easy; in fact, the child 'came out of the fit.' The pulse, which had been absent from the wrist, before the administration of chloroform, was perceptible at once, and the surface of the body grew warm. In about three minutes entire consciousness returned, and in a short time the babe nursed.

"Means were then adopted for regulating the disordered state of the bowels, upon which the convulsions were probably dependent. No vomiting, and no unpleasant effects whatever, followed the use of chloroform in this case. The nervous system was fortified against it, just as in acute tetanus, patients will bear enormous doses of brandy or opium."—*Bost. Med. & Surg. Jour.* Ap. 5.

# THE DENTAL NEWS LETTER.

OCTOBER, 1848.

We have, as our readers will notice, fulfilled the promise made in our last number, to enlarge to twice the size of the first volume. We have endeavoured to give a good proportion of original matter, and as extracts and selections, that which would be of the most interest, and the most recent. In glancing over the various articles in this number, we cannot but feel pleased at its appearance, and we confidently expect that the "Dental News Letter," will continue to grow in interest, in size, and the good will and confidence of the profession.

To Dr. J. D. White we would say, we trust he will continue the subject, as we are satisfied it will increase in interest the farther we advance. To all other contributors we return our thanks, with hopes that we shall hear from them frequently: and while upon this subject we have one complaint to make, and that is, that so many members of the Dental profession, and many of them among our best operators, should maintain so profound a silence on all the prominent questions that come up from time to time,—surely much good might be done by communicating. Almost every dental practitioner can advance something of interest. Then why not do it? On the ground of reciprocity it is their duty. They read all that is published, but by keeping silent they make no return for all the information thus derived. That they may have no excuse for such a course, we repeat the notice given in a former number, "that our pages are open to all communications of interest to the profession," and our English readers will take notice that this is designed as much for them as for those of our own country.

If we can only awaken more attention to Dental literature we shall be gratified; and not only gratified, but be able to send forth our little quarterly filled with good things. Come, gentlemen, let us hear from you in time for the regular issues of our "Dental News Letter."

In each number of the "News Letter," it is our design to give to our readers such things as will be of interest to them; and although to some few it may be "carrying coals to Newcastle," still there are many to whom they will be of importance.

Sulphuric Ether is still used to a considerable extent in the profession, though not of course in the proportion it was formerly. We find that much less fear is felt by those who administer it than when using the chloroform. It has evidently increased in favor since the decline of the latter, and we think it probable that the public will regain confidence in it, in a great measure.

Chloroform seems to be almost extinct, although several whom



we personally know use it frequently, and contend for its superiority over Ether. We have been informed that Ether and Chloroform combined is used extensively in the New York Hospitals, and much preferred over either one separate. Gutta Percha as an article for taking impressions has not met the expectation, the cause of which is that it is required to be put into the mouth rather warm for comfort. There are many purposes to which it may be put, such as laying a very thin layer of it over the natural root when inserting pivot teeth, for varnish etc., but plaster for taking impressions is decidedly in the ascendant, and we are informed by those who have tried it faithfully that for full cases, both of the lower and upper jaw, it answers an admirable purpose. It is used quite thick, as thick perhaps as mortar, and allowed to "set" while in the mouth.

In New York a short time since we saw a lower plate which was "loaded" as it is termed. This was done somewhat after this manner: the plate was struck up, the teeth lined and adjusted, and then built up outside and in with *tin*; this was done with a tinman's soldering iron embedding the lower half or more of the teeth, after shaping it properly the whole of the surface of the tin was lacquered over a gum color, this made the case heavy enough to be retained in the mouth, besides giving the ordinary fullness.

This plan we understand is practised to a considerable extent.

We publish in this number a communication from Dr. Hill on the subject of his "Stopping," we can add that the article appears to be growing rapidly in public favor, and bids fair to realize the hopes entertained by its inventor.

#### DENTAL REGISTER OF THE WEST.

We have received the July number of this quarterly. It is a very neat periodical, well conducted, and deserving of abundant success. We trust we shall receive it regularly. We quote the following, which is of interest.

*"Waxed Cloth Cones.*—We received, a short time since, of our colleague, Dr. Brown, of St. Louis, a couple of very ingeniously contrived Waxed Cloth Cones, for arresting Alveolar Hæmorrhage; they appear to be made of strips of muslin coated with wax, then rolled so as to very much resemble roots of teeth—of these various sizes might be kept, so that when a case of hæmorrhage occurs, we have only to select one as near the size of the socket as possible, and after removing the blood from the same, force one of these cones in, and thus by compression arrest the hæmorrhage.

They are certainly exceedingly convenient, and we think possess one or two advantages over any thing else for the purpose we have seen—for instance, if warmed by the heat of the mouth or otherwise, they will assume the form of the cavity, and close it up as perfectly as possible.—CIN. ED."

We are called upon to record, since the issue of our last number, the death of two members of the Dental profession, Dr. P. S. Van Patten, of Lancaster, Pa., and Dr. L. F. Lee, of Bridgeton, N. J., the former of pulmonary consumption, and the latter of bilious dysentery.

We were well acquainted with both these gentlemen, and for whom we ever entertained the kindest feeling and highest respect.

They were both highly esteemed for their skill and integrity in their profession, and have left a large circle of friends and acquaintances to mourn their loss.

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### AMERICAN DENTISTS ABROAD.

Some years ago Dr. C. S. Brewster, an American dentist who studied his profession (if we mistake not) in Philadelphia, went to Paris, and located there, and became very popular; was made dentist to the Royal family, and had various honors conferred upon him; on a visit to St. Petersburg the Emperor of Russia knighted him, beside presenting him with various tokens of his esteem.

Since then Dr. E. Maynard, of Washington city, made the tour of Europe, and making some stay at St. Petersburg, operated for some of the Emperor's family, and on leaving the Autocrat made him also a valuable present as a testimonial of his abilities as a dentist. And now, we have another American dentist (a native of Philadelphia) in Paris, we speak of Mr. T. W. Evans, specimens of whose plugging was exhibited at the exhibition of the Franklin Institute in the fall of 1847 which secured him a medal, and drew forth many commendations as to the skill of the operator. On his arrival in Paris he waited on Dr. Brewster, who, after examining his specimens, immediately offered him a partnership with flattering prospects, which offer was accepted, and Mr. Evans, we are informed, is now a partner of Dr. Brewster. †

We had hoped long ere this to receive a communication from Mr. Evans, but the revolution there, and his individual affairs, have doubtless occupied much of his attention; still we shall look for something from him.

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We have before us the Fourth Annual announcement of the *Ohio College of Dental Surgery*. This institution seems to be in a very flattering condition. The regular annual session of Lectures will commence on the first Monday of November and continue four months.

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*Baltimore College of Dental Surgery*.—This institution is also in a very flourishing condition. The lectures commence on the first Monday of November and end the last of February.

The Mechanical and Dissecting rooms opened on the first of October.



*The Natchez Dentist.*—We have received two numbers of this very unique quarterly, published by H. Claggett and A. C. Dayton, surgeon dentists. It is issued we presume for the benefit of their patrons, and for general circulation.

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### TREPHINING THE ANTRUM HIGHMORIANUM— DEATH WITHIN FIFTY HOURS. DR. EVE.

“The 12th of April, 1844, I operated for enlargement of the right superior maxillary bone. The source of the disease was quite obscure. The patient, a young lady aged eighteen years, had an indistinct recollection of receiving a blow, by a fall upon the cheek, while going to school, very early in life. The tumor was supposed to have originated in the antrum, and had now acquired considerable size. The eye was distorted by it, the cheek projected, the nostrils were closed, and the palatine process of the upper-jaw of the right side much depressed.

“An operation being decided upon, the membrane of the mouth was so detached as to expose the anterior surface of the superior maxilla, and while the lips were drawn to the right side, the crown of a trephine of common size was applied to the bone. Its action was gradually continued until it had attained the depth of one and a half inches. The enlargement proved to be osseous, and the operation for its total removal was for the present abandoned. The diagnosis of four physicians, that it was of a polypous nature, was erroneous. A small strip of linen was placed in the opening made by the circular saw, and the patient retired to bed. The operation was well borne; there was no unusual hemorrhage nor unpleasant circumstance attending it, except the error of diagnosis, which was not communicated to her, but was afterwards to her parents. The patient was seated during the time in a large arm-chair. She took  $\frac{1}{8}$  gr. morphine when she lay down. The next day our patient was up in a chair by an open window, as the weather was pleasantly warm, engaged in a sprightly conversation with her friends. She retired early to bed this night without a complaint or unpleasant symptom. About 11 o'clock, having occasion to spit, and finding the basin had been removed from the chair, near the head of the bed, upon the floor, without disturbing her mother, who was sleeping with her, she reached out of bed, with her head down, and took up the basin from the floor. A discharge of blood from the mouth, and pain referred to the seat operated upon, roused the family, and I was sent for. The bleeding had ceased when I arrived, having not amounted to more than a table-spoonful, probably not so much; the lint was removed from the wound, and the mouth freely washed with warm water. Having thus quieted the alarm about the hemorrhage, a tea-spoonful of laudanum was adminis-

tered to relieve pain and induce sleep, and at 12 I left the patient sleeping quite naturally.

“Between 5 and 6 o’clock the next morning, I was summoned in haste by the report that my patient was dying. Her mother stated that she had slept as usual up to day-light, when, to her great surprise, she did not answer when spoken to. The patient was now comatose, unconscious, insensible; had slightly stertorous breathing, dilated pupils, the pulse was frequent and feeble, the eye-lids closed, the countenance flushed, and the skin warm and moist. These symptoms continued in spite of the assiduous and energetic treatment, consisting of cold to the head, sinapisms over the extremities and body, stimulating enemata, directed by four physicians. The patient expired about 12 M., fifty hours after the operation. No post-mortem examination was allowed.”  
—*South. Jour.*

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### SINGULAR CASE OF SWELLING OF THE NECK.

DR. PARRISH.

“J. A., a gentleman of robust constitution, aged forty-two, had four teeth filled by a dentist in Philadelphia. On his return home the following day, he exposed himself imprudently to the cold, pursued his business as usual, and at night was seized with chilliness and stiff-neck. On the second day following I was summoned to visit him. Found the whole anterior portion of the neck considerably swelled, indurated, and somewhat tender upon pressure. The tumor occupied a space from the chin to the sternum, and extended laterally on the upper portion, to within about an inch of the angle of the inferior maxillary bone, forming an irregular triangle with its apex at the upper part of the sternum. When exposed to view, my first impression was that it was a Bronchocele, but the history of the case convinced me that it could not be so. The thyroid, the sub-maxillary, and the sublingual glands were all extensively tumefied—so that the patient could not protrude his tongue beyond his teeth—spoke indistinctly, and experienced difficulty in deglutition. A saline cathartic was immediately prepared, which, after much effort, was swallowed. Forty leeches were applied to the swelling, and followed by a plaster of Cantharides. The blister was dressed with warm poultices, and discharged very freely. It was followed by some abatement of the pain, but there continued a great degree of tension of the muscles and integuments; and every attempt to swallow was attended with much suffering. The cathartic operated freely upon the bowels, and was repeated when necessary, in the subsequent treatment of the case. The blistered surface healed in a few days, the plaster of Cantharides was re-applied, and warm bread and milk poultices continued as before. This treatment was persevered in for ten days; the difficulty in swal-



lowing not being in the least diminished until the tenth day, when a copious discharge occurred internally from the middle portion of the tumor, which, of course, admitted a freer passage into the stomach. Up to this period, the patient was unable to lie down, owing to the pressure and weight of the diseased portion upon the trachea. He sat most of the time in his easy chair, and could only swallow thin liquids. His breath being offensive, and mouth very unpleasant to himself, a cleansing gargle was recommended. To use this he would fill the mouth, stand up, hold fast to the bed post, and with the utmost exertion, was enabled to wash out the mouth and pharynx. On the twelfth day, a copious evacuation of muco-purulent matter issued from one side of the mouth; as nearly as I could ascertain from the excretory duct (Wharton's) communicating with the sub-maxillary gland; and on the following day, a similar discharge occurred on the opposite side.—There still remained, however, a good deal of tenderness, and the poultices were continued, with a view of keeping up the suppurative process, until entire relief should be obtained. Of course the discharges were followed by much relief, and diminution of the swelling. Three weeks passed by, and the patient became *impatient* to resume his business—though there still existed a slight induration of the parts around the walls of the trachea, and particularly in front. There was also a disagreeable traction of the muscles in every effort at deglutition. This was very readily seen when the neck was uncovered, particularly in the action of the depressers of the os-hyoides, and larynx. The patient was now directed to anoint the part with ung. Iodine comp. diluted with lard. He could not endure, however, more than two or three applications, and he preferred looking after his business, keeping his neck well protected with a scarf, and anointing occasionally with opodeldoc. In a week after this I was called to him again—the soreness and swelling had increased, and the parts were very much indurated. Some cotton was now wet with equal portions of Granville's lotion and whiskey, and applied to the part, with a view of exciting speedy counter-irritation. In a few minutes the skin was very much reddened, and in one or two places vesication had occurred. Warm bread and water, and bread and milk poultices were continued, and there were evident marks of suppuration apparent in a few days. The tumor soon began to point, just in front of the larynx, and in a few days more, was opened with an abscess lancet. The discharge was profuse, and gave immediate relief. It was kept up for several days, and the opening healed. The suppurative process continued, and a discharge again occurred, without the use of the lancet. The surrounding induration yielded, and the patient convalesced rapidly. He is now able to go out and pursue his business.”—*N. J. Med. Rep.*

From the "Boston Medical and Surgical Journal."

## ANCHYLOSIS OF THE JAW OF THIRTY-FOUR YEARS DURATION.

The following interesting case we copy from the above well known periodical.

Mr. ———, a native of Scotland, aged 50 years. At the age of 11 years he was apprenticed to the merchants' marine, from a Scottish port. Whilst on the homeward-bound voyage from the West Indies, in 1813, the vessel on which he was aboard was pursued by a French frigate. The chase was long and exciting, and every effort to increase the speed of the vessel, to effect an escape, was of course made by the captain. For this purpose, various practicable alterations were effected in the vessel's trim, and every "stitch" of canvass that could be brought to bear was put into requisition. The lad was sent aloft to "loose" the "main-royal sail," when from a heavy plunge the ship made in a high running "head sea," and a squall of wind simultaneously striking her, the "royal" mast was "carried away," i. e., snapped asunder, and precipitated him "in-board" of the long-boat below; breaking both his legs—one a compound fracture of the fibula and tibia midway between the ankle and knee, and the other a compound fracture at the knee-joint, driving the *patella* almost through the joint. Both arms were broken, and three ribs on the left side, and the left *clavicle*. The teeth were forced through the lips, in consequence of his face striking against the inside of the boat; but no other injury was inflicted on the head, otherwise than that of insensibility arising from the general concussion and shock received by the sensorium and nervous system. The vessel escaped from the grasp of her pursuer, and in the absence of better assistance, the ship's carpenter, for the nonce, doffed his office of surgeon to "*sprung*" masts and yards, solutions of continuity in seams, and strictures in the pump's urethra, and devoted his skill to carpentering fractured bones, and "fishing" the broken limbs of the unfortunate lad, and thus with "home-made" rough "splints" he placed the fractured limbs in position, first having removed, with his chisel! the comminuted portions of fractured bones, and, to the best of his abilities, bringing together the flesh by the adhesive qualities of plaster comprised of tar-pitch and canvass. He then proceeded from the ship's "medicine chest," and strict diet, to place him under rigid "antiphlogistic" treatment, and he was in every way—using his own words—"well cared for."

Several days after, the vessel made the port of Portsmouth, Eng., and he was taken ashore, to the marine hospital. The limb, implicated with the compound fracture at the knee-joint, was amputated between the middle and lower third of the thigh—and the other fractures treated *secundem artem*, with the view, if



possible, of ultimately saving them. So absorbed were the surgeons with the numerous fractures, and the desire to save his life, that they altogether lost sight of its important portal, the mouth—further than bringing together and preserving in apposition the wounds of the lips. The muscles and ligaments of the jaw daily contracted but so gradually, that even the patient himself, overwhelmed as he was with sufferings, *did not perceive* the advance of his terrible affliction, until he discovered that he could not, upon the return of his appetite, open his mouth to partake of food. His jaws were firmly fixed, and the teeth closely locked upon each other. Treatment and experiment alike failed to overcome this additional calamity, and he was, in due course of time, in all other respects “discharged cured.”

After the war he emigrated to this country, and for many years has been a resident of this city. Several years since, on the eve of Dr. Mott's departure for Europe, he consulted this gentleman as to the possibility of obtaining relief by an operation. Nothing was done, and tumefaction and suppuration supervened. He was, in consequence of the successful operation which I had performed, in re-placing, by artificial means, the loss of large portion of the maxillary bones and teeth (from a gun-shot wound) in the case of Lieut. S., U. S. N., advised to consult me, with regard to any chance of success attending an operation for securing “artificial joints” to the inferior maxillary bone.

Having examined the case, I advised him by no means to submit to an operation of this kind; that such an operation had been performed several years since, by an eminent surgeon, upon the jaw of a young lady\* similarly affected, with the most disastrous results; that she had applied to me for relief, and the only solace she ever received for her sufferings was the overcoming the frightful deformity of an *absent cheek*, which was successfully and beautifully accomplished with an artificial one made by my friend, Dr. Smilie, dentist, of this city. The maxillary bones, gums and teeth on one side, were completely exposed, her jaws locked, and the teeth rigidly closed and fixed together, thus presenting the appearance of a grinning skeleton, and on the other exhibiting all that was youthful, healthful and beautiful. The failure of youthful resources to secure artificial joints, did

\* The ankylosis affecting the maxillary bone of this lady was superinduced from the cauterizing the inner surface of the mouth, during her illness (fever, cancrum oris). The surface sloughed, and produced an angry ulcer. The cauterizing was continued, and the consequences were, that the whole of the left cheek was corroded entirely away from its junctions with the maxillary bones, and the attempt of an eminent dentist, with her surgeon, to extract a molar tooth, fractured her jaw, which, in connection with the disease, was the remote and exciting causes of the ankylosis. The operation for producing artificial joints, was performed by cutting through the ascending portions of the jaw, just below where the condyles and coronoid processes bifurcate. From the account of the case given by the young lady, I could not rightly comprehend what treatment she had received, or what cause was assigned for the failure.

not in this instance warrant a similar experiment upon those of age.

I found his teeth, as already stated, firmly locked together; the gums tumefied and vegetating, pus oozing from their edges and the alveolar dental periosteum, the breath feverish and fetid. I proceeded to remove the several teeth after their order, two superior and two inferior posterior *biscuspids* on either side, four superior and four inferior *multicuspids*, and the two superior lateral *incisors*—the two central teeth having originally been extracted for the purpose of enabling him to speak and partake of “spoon meats,” upon which he has subsisted for thirty-five years.

I left in the mouth two superior and two inferior *cuspidati*, the same number of *bicuspids*, the four inferior *incisors*, and the four *sapientiae* teeth. The removal of the above teeth gave him great relief. It enabled him to cleanse his mouth upon the inside and outside of the teeth; it gave ample room to the tongue, both for speaking and crushing the food, that he was in the habit of taking, against the roof of the mouth, and, to his astonishment, improved the sense of taste, to such an extent that he conceived—until explained to him that closed jaws materially affected this sense—that the “character of his food had changed.” The tumefaction and suppuration of the gums and periosteum subsided, as did also the fetid odor of the breath, and the digestive powers recovered from the prostration superinduced by these exciting causes. He was most anxious, at the time, that I should extract *all* the teeth from his head, particularly the lower incisors, that he might enjoy still *more* space in his mouth for his “cribb’d” tongue. I should have complied with his desire, but that the position in which his jaws were fixed, and the *tout ensemble* in which the maxillary apparatus was placed, and prognosis, did not indicate nor warrant such a mode of procedure. It is a well-demonstrated fact, that the inferior maxillary bone undergoes various changes, more so than any other bone of the human frame. At birth, the angle of the jaw is obtuse; at maturity, when all the teeth are developed, it forms a right angle; and as the teeth make their appearance, and are severally lost to the animal economy, so does the jaw undergo material physical change, either with the addition, or from the loss of each tooth. I prognosticated, therefore, that should I extract *all* the teeth, the muscular contraction would continue, and however firmly the *condyles* of the jaw might be ankylosed with their glenoid cavities, that the immense power of the maxillary muscles, and the constant strains upon them, would draw the *ramus* of the jaw upon the superior maxillary bone, and anteriorly close the jaws altogether, so as to deprive him of the ordinary functions of the lips (from their compression upon each other,) and the mouth; and I did not extract the lower incisors, because it would have deprived him of this



"dam," as it were, to retain the saliva, as well as prevented the forming of the *dento-lingual* articulations of the voice.

His second visit to me proved the fortunate prognosis that I had made upon his case. The muscles *had* contracted so as to force the remaining teeth, which I had left in the mouth, for the purpose of keeping the jaws apart, considerably out of their perpendicular lines of position. The *dentes sapientiæ* were now decayed, and their spiculated surfaces were not only forced into each other, but were also forced over the *mylo-hyoidean* line of the jaw into the throat, contracting its capacity, and pressing down the tongue and the tonsils, and thus materially affecting the function of deglutition. Tumefaction and considerable inflammation of the gums and palate were present, the pendulum of which was elongated and exceedingly troublesome. He was much depressed in spirits, feverish, and complained of neuralgic pains over his temples, in the "balls" of his eyes, thence to the back of his head, down his arms, and to various parts of his body, and was oppressed with the feeling that he must die of "lock-jaw" or suffocation. "One of these times, I shall give one struggle, and it will be all over with me," were his desponding remarks. He having great confidence in me, my encouraging explanations that *tetanus* and his "lock-jaw" were totally and vitally different, relieved his mind and feelings from the oppression that was weighing heavily upon them. I then extracted the four "wisdom teeth" and one inferior canine tooth, which had been forced *forward*, out of its line of position, by the pressure upon it. I snipped off considerable portions of the tumefied and vegetating gums\* near the tonsils, and applied powerful astringent washes to the mouth, and administered alteratives internally. His natural "spirits" have recovered their buoyancy, and his difficulties (for the present) are at an end—expressing himself yesterday, when I dismissed him, as "altogether another man."

Should the contraction of the maxillary muscles continue so as to draw still upon the jaw, I shall endeavor to overcome the difficulty and prevent it, by forming a wedge of gold upon either side of the mouth, in the shape of an hour-glass, the ends, of course, to be nicely adapted to the gums on the dental surface of the maxillary bones, somewhat after this manner,  $\begin{matrix} \circ & -1 \\ \times & \dots 2 \\ 1-\circ \end{matrix}$  No. 1, 1, representing the ends of No. 2, letter X, or hour-glass, to be placed perpendicularly between the superior and inferior maxillary bones; by which means I should hope to keep them apart, without local or constitutional irritation.

A. C. CASTLE, M. D.

New York, May 19, 1848.

Surgeon Dentist.

\* I did wrong to snip off the vegetating gums. It was the cause of much trouble both to myself and patient.

# THE DENTAL NEWS LETTER.

Vol. II.

JANUARY, 1849.

No. 2.

For the Dental News Letter.

## PLUGGING TEETH.

*Messrs. Jones, White & Co.*

GENTLEMEN—The favorable reception that my first communication has received, is a sufficient apology for me to furnish you with a continuation of my last article on *The Formation of the Cavity for Plugging*. For this purpose, numerous small cutting instruments are necessary, not only to approach all parts of the cavity of decay, but to enlarge it in any desirable direction; for it is not to be presumed that the freaks of decay will always form a cavity best suited to retain a plug; besides, gold foil cannot be consolidated, unless as fast as placed in the cavity, it is embraced by its parieties more and still more firmly at every effort with the instrument. Yet it is not indispensable that it should do so in every direction, or when only the first portions of the plug are introduced. A very good and simple method for a young learner to adopt, when he has dressed the margins of the cavity, is to lay a straight instrument across them, and then to cut down at right angles from it; in this way he is sure to give the cavity a proper shape; in short, it is the business of the dentist to shape the cavity to suit himself, so far as it can be done without injuring the tooth. A cavity best suited for plugging is where the parieties run from the orifice to the bottom, parallel to each other; and this character should always be obtained as far as practicable upon the coronal extremities of the teeth, especially when they are disposed to wear down. What are commonly termed the hatchet-shaped, and scoop or hoe-shaped instruments, of different sizes, bent at different angles, are necessary; they can be obtained ready made, but every dentist should be capable of shaping the points and tempering them to suit himself; it is impossible for the instrument maker to judge of and produce the various niceties of temper and shape which these instruments require. Small flat drills, for drilling catches for the plug upon different parts of the cavity where they can be applied, are also requisite. The following is a very easy and effectual method of tempering this kind of instruments—first file and bend the instrument suitably, then heat it a very little above a cherry-red in the flame of a spirit lamp,



and suddenly plunge it into cold water, (or sealing wax, which is perhaps better,) placed close enough to the point while heating, to prevent it from cooling much in passing from the flame to the water; now it is as hard as it can well be made, and to exert much force by bringing it in contact with any hard substance would break it almost as easily as glass, to prevent which, polish one side of the point upon a stone, so as to distinguish the slightest tinge of change in color; then place the neck of the instrument again in the flame, with the cutting edge jutting through about half of an inch, and impinging upon a piece of cold steel; held in this position a few moments, the polished surface of the instrument will be observed to change to a light straw color, which will deepen until it turns blue; when this light straw color reaches the point of the instrument, it should be again plunged into cold water; now polish the instrument, and it is fit for use. The reasons for this process of tempering are obvious; it is desirable to make the neck, and especially the angles or curves of the instrument, of a light blue color, which is spring temper; as it is important that it should yield to pressure without breaking, and that it can be slightly bent at pleasure to suit any temporary purpose, and at the same time the cutting edge should be very hard. As the edge is much thinner in most cases than the neck, the same amount of heat that would render it light straw color, would not be sufficient to reduce the neck to a blue, but the cold steel in contact with the point conducts off the heat whilst sufficient can be applied to the neck to turn it blue. In this way the temper can be so regulated that the edge can be extremely hard, while the instrument will bend up to an eighth of an inch of the point; so that we can cut the hardest tooth substance, as with a diamond set in steel, without its breaking.

*Characteristics of Decay.*—On this subject authors differ very widely; and while we do not wish to be understood as attempting to settle this difficult question, still a few remarks upon some of its properties, &c., may not be out of place; it is asserted by some that every particle of *decay* must be removed from the cavity preparatory to plugging, (to this we most heartily assent;) and by others, that every vestige of *colored* substance must be removed, that the tooth may present a white and healthy appearance! Now whiteness is not always a healthy sign, as sometimes the softest decay is whiter than other parts of the tooth; nor again is a black appearance always a sign of decay. How is it with the darkened and polished surface of stationary decay, so called, and which is more dense than the sound tooth? The tubuli having filled up with some kind of matter rendering the dark spot frequently less destructible than the surrounding tooth substance. Examine such cases after being stationary for years, as is the case sometimes, and when decay again commences, it is either by a white and softened margin, or by a whitened centre. While

tooth substance is changing from a healthy state to a state of decay, it is not black, but white, brown, or yellow, as the case may be; but it often becomes black after it has partially decayed. The tubuli take up fluids which *become* colored, or coloring *matter* is imbibed from the decay without the structure of the tooth being at all broken up; that they are capable of doing so, is proven by immersing a tooth in the tincture of red saunders, which will color it as dark as dark mahogany; but the tooth never turns white without a loss, or breaking up of structure; so it will be seen that color is not an invariable criterion to judge by, whether a tooth is decayed or not; but texture combined with opacity and discoloration is, except when we approach the cementum, *it* being about the same texture as partial decay. It is well known that in many cases where the decay is discolored, a dark line is observed running along the tubuli, from the decayed portion, almost as soon as it is through the enamel, down to the pulp cavity. I will cite a single case as an illustration. A gentleman who had been residing for some time at New Orleans, accompanied his sister to my office, who was having her teeth operated upon, and while there, expressed a regret that he could not have his teeth plugged also; and upon inquiring the cause, he informed me that the nerves always had to be exposed by cleaning the cavity, and it was so painful that he could not bear it, and even if he did, his teeth became diseased at the roots, and had to be extracted. I requested him to allow me to examine them; he assented; and, upon examination, I remarked at once that I could plug them without exposure of the nerve by cleaning; I convinced him that the dark portion of his tooth was as hard as the white, and to remove that which had lost its density of structure was sufficient; this has been done, and many valuable teeth saved for years. This darkened character of the tooth substance is not uncommon in tobacco chewers, and it is obvious that as the tubuli of the tooth run from its periphery towards the pulp cavity, that when the impervious enamel is removed by any cause, that they will take up coloring matter of any kind, and become discolored. Others assert, again, that partial decay may be left in the tooth, that decay will not go on if the cavity be plugged solid. It is not impossible that the partially decayed bone will not become hard again by infiltration of calcareous matter from the pulp, in the same way that the cementum is formed; but it is not often true that decay will not go on when a tooth is plugged in this way, because there are sufficient heat, moisture and air pervading at all times in the tooth to favor chemical decomposition when a nucleus of decay is once formed, yet decay may not be as rapid as when the tooth is not plugged. Now, it is almost needless to say that the instruments used for cleansing and forming the cavity should be as thin and sharp as possible, and have sufficient strength to bear slight pressure, because the decay, as well



as the sound bone, is sometimes exquisitely sensitive to the touch,\* and to attempt to prepare a cavity with a thick and dull instrument in such cases, would excite undue and unnecessary pain; besides, the sharper the instrument, the more readily the difference in the texture of the decayed and sound bone is distinguished. A small lock of cotton, lint or napkin should be held in the hand, to wipe the decay from the instrument as fast as it is taken from the tooth, as well as to wipe it from the cavity and from about the tooth, in order to keep it out of the mouth as much as possible.

*Material for Plugging.*—Great care is necessary in selecting, as well as for preserving, material for plugging. It should be kept in a dry place, and a weight placed upon that which is not wanted for immediate use, in order to prevent the air from getting in contact with it, as it will render it more or less brittle and dusty; by leaving it exposed to the air, it loses a peculiar freshness, which renders it less capable of being firmly packed. What is commonly termed No. 6, is better suited, perhaps, for general use than any other thickness, because it is not too stiff or strong to be packed into a cavity where the parieties are weak, nor too light to make a very hard and compact plug in a cavity better supported. But we apprehend a great deal may depend upon the habit of the operator, because some prefer No. 4, and others 15 or even 30 grains to the leaf. It is generally asserted that the lighter leaves should be used for the small cavities, and the heavier leaves for the larger ones; but we are in the habit of using the thicker leaves for the smaller, and the thinner leaves for the larger cavities, for the reasons given above; the lighter leaves can be firmly packed with less force, but they require a longer time than the heavier ones, and when the cavity is very large the parieties are weaker than when it is small. It is believed by some that gold cannot be used with the same success when the cavity is badly shaped, or the tooth frail, or when there is a very small hold for the plug, as tin; we must confess we were once of the same opinion also; but that opinion had been partly formed by consulting the views of others, and from transient experience; but practice, and a better knowledge of packing gold, have led us to a very different conclusion. It is obvious that gold is best, under all circumstances, and that tin should not be used except as a temporary filling, or a matter of economy. Tin may be rendered impervious to air and dampness, but it will corrode in most mouths, unless it comes in contact with the food in chewing, and then it rapidly wears away, as it does not become hard by packing or under pressure, as is the case with gold; in

\* We do not intend to give any directions with reference to the treatment of this condition of the tooth, or the treatment of the pulp, as it is too important a subject to be treated without a due consideration of its physiological and pathological conditions, to do which would interfere too much with the arrangement of the present papers.

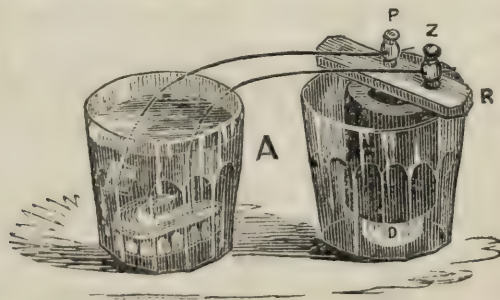
other words, gold will become hard and brittle by hammering, and tin will not; this is the principal reason why gold can be more successfully employed in a cavity where there is a very small hold than tin; because it is clear that a small hold with a hard metal, and one that can be made harder proportionate to the pressure applied to it, is more secure than it would be with a softer metal; and that tin "forms a kind of union with the tooth" differing from gold, is too ridiculous to be more than mentioned; and that the walls of the cavity are not strong enough to bear the pressure of consolidating gold, is equally so; if the tooth will not bear much pressure, use thinner leaves. We are sure that No. 4 can be firmly packed with as little pressure as can tin; but the gold must be well prepared, not only of uniform thickness, but pure, malleable and properly annealed; all this requiring care on the part of the one who prepares it.\*

J. D. WHITE, M. D.

For the Dental News Letter.

### ELECTRO-GILDING.

"Excelsior" being the motto of the dental profession of the present day, improvements have been rife of late years; among others may be found the gilding of temporary sets or parts of sets on silver plates. As many may yet be unacquainted with this collateral branch of our art, we offer the following directions for electro-gilding, which, although more particularly relating to artificial or plate work, will be found to apply equally well to other articles. The facility with which the whole process may be mastered, will, we trust, be an inducement to try the experiment. Our directions, if complied with, cannot fail to produce the most satisfactory results.



The battery best adapted for gilding small objects, or for a dentist's use, is Grove's; it will be found easy to be procured or constructed, and accompanies any electro-magnet, under various modifications. It consists, as seen in the cut, of a glass vessel,

\* We use the gold of Mr. Charles Abby & Son, No. 22 Pear street. and feel it a duty to say that it is more uniform in its peculiar qualities than any other which we have ever tried. It is but fair to add, however, that we have never tried that manufactured by Jones, White & Co.



A; a zinc cylinder, Z; a porous tube, forming a diaphragm, D; a strip of platinum, P; over the rest, R, are seen two thumb screws to connect the poles of the battery with the gilding solution and the article to be gilded.

To put the battery in operation, place the porous vessel, D, in the glass one, A, fill the porous vessel, D, with good *nitric acid*, and the vessel, A, with water barely acidulated with a few drops of *sulphuric acid*; and now, by immersing the cylinder of zinc and the platinum, held in their respective places by being fastened to the rest, R, across the glass vessel, the zinc, we say, being immersed in the very dilute sulphuric acid, and the platinum in the pure nitric acid, we have the battery ready for action, and merely requiring to be connected with the solution employed in gilding, and the article intended to be gilded, to form the circuit.

The gilding solution should be contained in a glass or porcelain vessel, of shape suitable to receive the article intended to be gilded; most probably a tumbler will answer the purpose. The space between it and the battery should be as small as possible, so as not to interfere with the intensity of the battery. The wire connected with the platinum, P, by means of one of the thumb screws, is to be armed with a piece of pure silver or gold wire or plate (soldered to the copper wire) so as to furnish a fresh supply of the oxidated metal to the solution.

To put the battery in operation, it now suffices to bring the object upon which we wish to obtain a deposit in contact with the wire connected with the zinc, Z, as seen in the above cut.

#### PREPARING SURFACES FOR ELECTRO-GILDING.

The first point to which we must direct the attention, and it is one of such paramount importance that, unless duly regarded, all subsequent operations will be vain, is the cleansing the surface of the article on which the metallic coating is to be placed. Unless this is effectually done, it is in vain to hope for perfect adhesion between the metallic base and the deposit; the latter will rise up in blisters where the surface is not properly prepared, and easily be rubbed off.

There are two methods of preparing metals for the reception of other metals—the wet way and the dry way. The latter is decidedly the best; but as it cannot be adopted in every case, we will describe both modes. The main intent of cleansing is, that the contact between the two metals may be perfect, and it effects this by removing grease and all extraneous matter, especially the oxides.

#### CLEANSING BY THE DRY METHOD.

The advantage of the dry process over any in which moisture has been employed, is that in the latter case several seconds, at least, must always elapse between the act of removing the article from its last liquid bath, and placing it in the solution of the

metal to be deposited ; and during this short interval the article, or some portion of it, very frequently undergoes an alteration, trivial indeed, but still an alteration, by the action of the air, which produces a film of oxide, infinitely thin it is true, yet quite enough to militate against the success of the experiment, as regards permanent adhesion. Therefore wherever the dry process can be adopted, it is decidedly the better.

The dry process is merely the operation of scouring after stoning the article intended to be gilded, with very fine powder of pumice stone, emery, charcoal or tripoli and clean brushes, utterly free from grease. It must be remembered throughout that grease and oxide are the great enemies to be expelled ; and, therefore, especial care must be taken to avoid contact with the moisture of the hand, which is of a nature to produce either. We must also mention here that the higher the finish the handsomer will the coat of gilding be ; and that all the scratches allowed to remain on the plate, far from being obliterated, will be rendered much more visible.

#### CLEANSING BY THE WET METHOD.

The solutions employed may be divided generally into two classes, the acid and the alkaline ; the action of the former is directed more towards the removal of oxides ; that of the latter to the removal of grease. As a rule, we would always follow the use of an acid bath by an alkaline, having first washed away the acid in several waters ; and this may be done, whether the operation commences with an alkaline bath or not.

An effectual "pickle" may be made of—

Sulphuric acid,	-	-	-	-	-	64 parts.
Water,	-	-	-	-	-	64 "
Nitric acid,	-	-	-	-	-	32 "
Muriatic acid,	-	-	-	-	-	1 "

The pickle is used by tying a wire round the article, and immersing it a second or two ; the action is very energetic, and of course must not be continued long. A mere bath of dilute nitric acid is often used. Of the alkaline solutions are caustic soda, or solution of soda and ammonia, or caustic soda and sal ammoniac ; or the articles may be boiled in a solution of common soda or potash, which is a very good method of cleansing them. Whatever solution is used, whether acid or alkaline, fresh water must not be spared for rinsing off all remaining traces, and the article must be dried for immediate use by pouring over it *boiling* distilled or rain water ; or if the process of deposition is not to be commenced immediately after being rinsed, it may be buried in hot or cold box-wood saw-dust until required. In addition to the detergent methods already given, an ancillary means, which has been found effectual, depends upon the fact that metallic and other surfaces, after exposure to the air for some hours, become



coated with a film of air so intimately, as to retain it even between themselves and any metal deposited upon them. It is found that the presence of this natural film very materially operates in preventing adhesion between the plates and the deposit; whereas, in the absence of the film, unless its place has been supplied by something else, (oxide or grease,) other things being in order, the *two* will effectually become *one*. Carrying out this principle, the boiling alkaline solution and the boiling water answer a double end; and hence are very effectual means of promoting perfect union between the metals. Heat operates still more favorably in causing the expansion of the metal, as we shall have occasion to mention when recommending its adoption in the process itself of electric deposition.

#### AMALGAMATION TO PROMOTE ADHESION.

This last method in the preparatory stage is of great avail in ensuring a successful termination to the experiments. After the articles are thoroughly cleansed, according to the instructions just laid down, they are dipped into a solution of proto-nitrate of mercury; when taken out, they are washed in abundance of water, and are then rubbed with leather, in order to promote the equal spread of the mercury. These operations are repeated until the whole surface is well coated with mercury. The ultimate character of the metallic deposit depends on the surface given to the mercury: if the employment of the leather is only such as is needed to effect the more equal diffusion of the mercury, the surface is dull or dead, and so is the deposit; whereas, if brisk friction is applied, and the mercury receives a good polish, such will be the character of the metal thrown down. By adopting this method of giving a mercurial coat as the foundation for the plating or gilding, a double advantage accrues; the close adherence between the metals is ensured,—and a coating of gold of any thickness may be thrown down. The mercury is subsequently driven off by heat, either heat from a spirit lamp, gently applied for the purpose, or the heat employed in some of the operations by which the work is finished.

Considerable advantage accrues (as we have before stated) in all cases of the deposition of metals, where adhesion is derived by the use of heat. It expands the baser metal, and so far expands its pores that the subsequent contraction, consequent on the effect of common temperatures, is likely to operate favorable in binding the metals together. The mode of heating the solutions will depend entirely on the circumstances under which the experiments are conducted. If a hot stone or sand bath be at hand, the object is soon accomplished; but in most cases the simplest plan is to use a lamp and a glass, or other retort, and convey the steam by a glass tube into the metallic solution.

The length of time requisite for plating and gilding, is entirely

dependent on the nature and uses of the article. The thickness of the deposit, of course, depends on the duration of the action. For articles not exposed to wear, a few minutes' immersion may be enough; for sets of teeth, spoons, forks, &c., subject to much wear, six or eight, or even more hours; always taking care to watch the process at times, in order to prevent the occurrence of black lines; whenever they appear, the action of the battery must be retarded by adding more water to the dilute sulphuric acid solution, or pouring some out, so as to reduce the power of the battery, and the article undergoing the process must be taken out of the metallic solution, washed in water, and should the black lines still appear, be rubbed with wet sand, using only the fingers for the purpose, or otherwise the sand would scratch the plate. The black lines having thus been made to disappear, the process is allowed to go on until a sufficiently thick deposit is obtained. Large objects, or those which are subject to a long action, should be occasionally withdrawn and their position altered, so that a uniformity of deposit may occur.

The proper color is given to the surface of electro-gilding by covering it with *gilding wax*, and heating it till the mass begins to smoke. Gilding wax consists of equal parts of the powders of saltpetre, sal ammoniac, sulphate of iron and verdigris, mixed with melted wax. This operation removes the brassy appearance, which the surface often presents, drives off the mercury employed in the preceding operation and gives the rich gold color, on which the beauty of the work depends.

#### TO REMOVE THE GILDING WAX.

Ordinary plated goods are finished off by polishing and bur-nishing.

#### SILVER SOLUTION.

Take one pint of pure rain or distilled water, add to it two ounces of the cyanuret of potassium, shake the bottle occasionally until the latter is entirely dissolved, and allow the liquid to become clear; then add a quarter of an ounce of oxide of silver, which will very speedily dissolve. The dissolution may be hastened by heat, and, after a short time, a clear transparent solution will be obtained.

#### GOLD SOLUTION.

Warm a pint of pure rain or distilled water, and dissolve in it two ounces of cyanuret of potassium, as before; then add a quarter of an ounce of oxide of gold. The solution will at first be yellowish, but will soon subside to colorless transparency. This solution should be kept in a blackened or opaque bottle to guard it from the light which decomposes it.

C. A. DU BOUCHET.



Our remarks in the last number of the "News Letter," in reference to the decrease in the use of chloroform, has called forth the following.—ED.

For the Dental News Letter.

### CHLOROFORM.

Having had a favorable opportunity to test the efficacy of chloroform, as an anæsthetic agent, for the purpose of extracting teeth, and performing other minor surgical operations, I would offer the following remarks for the benefit of the profession :

The number of cases operated in, under the influence of chloroform, both at my office in the city of Philadelphia, and that at Gloucester, has exceeded one hundred and fifty. In no case, has injury or inconvenience, immediate or remote, resulted ; and in but two cases have I been unable to produce the desirable impression, owing to the extremely acute nervous sensibility of the patients, and the small dose which I made a point not to depart from, never intending to produce insensibility for a greater length of time than necessary to perform the operation.

The exhibition of chloroform I have found far superior to that of ether or letheon. When properly administered, it never chokes the patient as the latter, nor does it leave any unpleasant sensation, such as headache, &c., but, on the contrary, seems to exercise a happy effect on the mind, slightly exciting and exhilarating.

That I have been able so uniformly to obtain favorable results from the use of chloroform, I would refer to three causes :

1st. Using only the pure article.

2d. Exhibiting only a small dose at one time, thus being able to repeat it for immediate subsequent operations.

3d. Regulating the dose carefully, according to age, conformation, temperament and other circumstances.

When given in an over dose I have once found it to impart to the patient, a female, a pugilistic energy and activity, which, however, had but a minute's duration.

At the time I commenced exhibiting chloroform, I had a tube constructed for its more efficacious inhalation, but soon found the hand of the patient to be the best inhaler, and by placing in it a piece of fine sponge of the size of a walnut, upon which from thirty to forty drops of chloroform had been dropped, I have always succeeded in producing unconsciousness, in from three to twelve inhalations—closing the nostrils of the patient when inhaling and directing them to close their mouth when exhaling through the nose.

In conclusion, I would remark, that I have the greatest confidence in chloroform, when properly administered, but would caution the profession against the indiscriminate use of such a powerful remedy, which, improperly administered, may prove injurious and perhaps in some instances fatal to the patient.

I remain, very respectfully, yours, &c.

CHAS. A. DU BOUCHET.

For the Dental News Letter.

## ARSENIC TO DESTROY NERVES IN TEETH.

We are well aware of the opposition made to the use of arsenic in destroying the nerves of the teeth, and we are as well aware that it can be, and indeed has been much abused. That many teeth have been destroyed by a too profuse use of it, or by its being left in the teeth too long, we will not deny, but we are contending for the skilful use and not the abuse of it.

We have unmistakeable evidence of its efficacy in our own teeth, as well as in the teeth of many patients whom we have treated successfully, and which teeth are now doing good service; and we are satisfied that if many who now oppose its use, would but give it a fair trial, they would change their minds and acknowledge with us, that until something better is discovered we will use arsenic, but with all necessary care and discrimination of course; and that they may do so, we give our practice with

## ITS MODE OF PREPARATION.

Pure crystallized arsenic, - - - - 10 grains.

Sulphate morphia, - - - - 15 "

Kreosote, sufficient to make it of the consistence of cream.

The arsenic should be ground in a glazed or glass mortar (a wedgewood mortar will not answer) to a fine powder, then add the kreosote and continue to grind for at least twenty minutes, when the morphia may be added, and the whole ground until all are intimately mixed. If the arsenic be ground fine enough it will be held in suspension, as it is very important it should be. The preparation should be kept in a glass bottle with ground stopper. If closely kept it will improve by age.

## ITS MODE OF APPLICATION.

After exposing the nerve, take a small pledget of cotton, about the size of the head of a pin, on the point of an instrument, and dip into the preparation and apply to the nerve, then place more cotton on top of it to keep it there securely, and enjoin upon your patient to see you in from twelve to twenty hours. If they cannot do so, don't apply it. After the expiration of the above time, you can generally, with a soft pliable probe, made sufficiently small, remove the entire nerve with little or no pain. If, however, it should be very painful, saturate a piece of cotton in ether and apply it, and in twenty-four hours you will be enabled to remove the nerve and prepare the cavity, then fill up the cavity with cotton and let it remain for a few days, after which plug the nerve cavity alone, but not to the extremity of the fang, say two-thirds the length of the fang, and in two or three days more finish the operation by excavating and plugging the crown. There are cases, however, where it will fail, such as where the tooth is not perfectly developed, and where there is an enlargement of the



foramen at the end of the fang, in which case it may produce an inflammation of the lining membrane; if this result, and the inflammation continue, the tooth had better be extracted, but these are rare cases. We never apply the preparation more than once, but if properly applied, once is sufficient.

If a large molar tooth be treated and, after the completion of the operation, there should be any pain, or a sense of fulness in the gum, we always advise the application of a couple of leeches, which generally gives immediate relief. Our manner of using it may be modified, of course, as experience dictates, but in the main will be found to be correct.

We have thus given as full a description as necessary, to enable any one to try it, and we would be pleased to have the experience of others on the subject.

R.

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For the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

An adjourned meeting of the society was held at the Hall of Pharmacy, on Tuesday evening, December 5, at 7 o'clock, for the election of officers, when all the former officers were re-elected, and the following gentlemen as examining committee—Dr. J. D. White, Dr. E. Parry, Dr. Jas. Fleming, Mr. C. C. Williams, Mr. F. Reinstein.

After the election, the regular meeting of the society was held. Dr. E. PARRY, President, and Mr. C. C. Williams, Secretary pro tem.

Minutes of previous meeting read and adopted.

The committee on Cabinet and Library reported progress, and were continued.

A communication from L. Gilbert was read, in which he returned his thanks to the society for their favorable report on his central cavity plate.

Mr. W. R. White was now elected a member, after which Dr. E. Parry read an Essay on Third Dentition, relating a case of much interest, which he had watched with great care. After which, oral communications being in order, Dr. J. D. White followed with the relation of several cases which had come under his notice somewhat of the same character. He doubted, however, that all cases were not third dentition that were so called, and showed clearly, by the cases he had cited, that they were reproductions by the same organs, or multiple developments, and not third dentition, or a removal of the powers, but that when late in life teeth had been erupted, then it was third dentition, or a renewal of the vital forces.

Mr. C. C. Williams followed on the same subject, stating a case where a hard substance was found in the gum, which would

not yield to pressure, and on examination a large molar tooth was found lying longitudinally along the jaw.

Amalgam fillings were next discussed at some length; after which the attention of the society was called by Dr. Parry to a full set of artificial teeth exhibited to them, and manufactured by Jones, White & Co. Many remarks were made thereon, when, on motion, a committee was appointed to examine the article, and report at the next meeting. The committee were Mr. C. C. Williams, Dr. J. D. White, and Mr. F. Reinstein.

On motion, adjourned.

M.

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For the Dental News Letter.

*To the President and Members of the Pennsylvania Association of Dental Surgeons.*

GENTLEMEN—Although I am far removed from you, yet I often think of the members of my own profession, and of that society of dental surgeons in my native city, in whose welfare I feel a lively interest. And most ardently am I desirous that every American dentist should know what is known, and be able skilfully to practice every valuable improvement of this age in which we live. And although I may have but little to impart, yet that little is at the service of each and all the members of my profession; and gladly would I hail the day that should make all that is sound in science, and valuable in art, common property.

In a recent visit to London, I was not only greatly gratified, but derived much valuable information, in visiting several of our London professional brethren. Such intercourse with skilful members of the profession I believe to be a most valuable means of improvement. The American Society of Dental Surgeons was founded with special reference to the advantages of association; and the improvement to be derived from intercourse, and the anticipations of the most sanguine of its founders, have been fully realized.

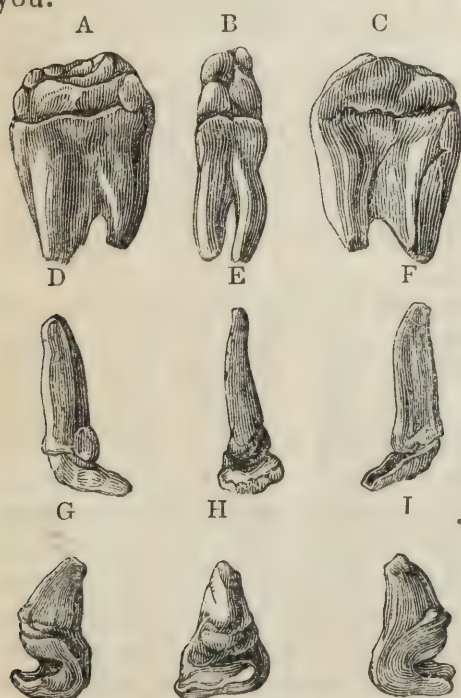
The same motive prompted the few members of the profession who met in convention in Philadelphia, in 1845, for the purpose of organizing a State society, under the name and title of the Pennsylvania Society of Dental Surgeons. It was formed, and has succeeded admirably, notwithstanding many members of the profession thought the formation of such a society impracticable. The advantages of association to the dentist are no doubt as great as they are to the physician or the agriculturist. In these associations, by the discussion of subjects connected with the profession, and by the contribution of each according to his ability, by the comparison of the different modes of practice, and the making known all the new discoveries and improvements, we shall place the profession on more commanding ground, and better serve the generation in which we live. These are the feelings with which



I am actuated, and I shall gladly, as time and circumstances allow, contribute my mite of material to the common stock.

While in London, I called on Mr. Leonard Keocker, one of the oldest dentists in that city. Mr. Keocker formerly practised in Philadelphia, where he was much esteemed. He removed to London many years ago. He is well known to the profession in Europe and America both as an author and a practitioner, and to him the department of dental science is indebted for some of its most valuable contributions. He has devoted himself to his profession with great energy, and has attained much skill in the treatment of dental and maxillary diseases, and as a dental pathologist and practitioner, he ranks among the first in Europe.

Mr. Samuel Cartwright, who is well known to the profession, has retired from practice, after many years of great usefulness, leaving a very valuable business to his nephew, Mr. George, his former pupil, and for many years his assistant. Mr. George, who has been a lecturer on dental surgery for several years in the University College, is esteemed as one of the most scientific dentists of Europe. His collection of anomalous and pathological specimens is extensive and valuable, and the readiness and willingness with which he communicates to others his great fund of valuable knowledge, is characteristic of the man of science, and renders him a most valuable member of the profession. He very kindly presented me with the casts of several teeth, drawings of some of which I send you, hoping that they may be of interest to you.



*a, b, c,* are three views of an upper dens sapientia, which forced its way between the first and second molares. It is very much flattened and considerably wider than usual. *a,* is a posterior view; *b,* buccal side; *c,* anterior surface.

*d, e, f,* are three views of a lower lateral incisor, with the crown bent nearly to a right angle with the root. It has the appearance of having been broken and reunited.

*g, h, i,* are three views of an upper central incisor, which developed itself much within the dental arch. The crown is bent nearly double. *g,* and *i,* are side views; *h,* a back view.

Since my residence here, I have made some additions to my collection of anomalous and pathological specimens; copies of

some of which I shall take pleasure in sending you at some future time.

Wishing you, gentlemen, both in your individual and associated capacities, every success,

I remain, very respectfully, your obedient servant,

THOMAS W. EVANS.

*Paris, December 1, 1848.*

The above paper we are pleased to receive, and hope it may be the beginning of a series which shall be interesting and instructive. It is, as has been seen, addressed to the Pennsylvania Association, but as the society does not meet before February, we lay it, therefore, before our readers.—Ed.

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For the Dental News Letter.

### TANNIC ACID.

*Tan* or Tannic Acid is prepared from gall nuts or galls. Galls consist principally of three substances, tannin or tannic acid, yellow extractine and gallic acid. Their decoction has a very astringent and unpleasant bitter taste.

Pure Tannin exists in galls to the amount of from forty to forty-five per cent.

Tannic Acid is a white or yellowish solid, inodorous, extremely astringent, very soluble in water and alcohol.

In cases of excessive hemorrhage after the extraction of a tooth, it seems to answer a better purpose, when applied dry on cotton, than the tincture of galls.

For toothache, combined with sulphate of morphia in the proportion of two parts tannin to one part morphia, and applied dry on cotton, it forms one of the best preparations in use. S.

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### TETANUS CURED BY CHLOROFORM.—MR. BAKER.

“A man had his finger jammed in machinery. On the fifth day he was seized with tetanic spasms: he was conscious, but had lost all power of deglutition and articulation. He was ordered a turpentine enema immediately, and the tinct. cannabis sativa 20 minims every 3 hours. When again seen, Mr. B. ascertained that the attendants could not get him to swallow the medicine, and that ineffectual attempts had been made to give the glyster. Chloroform was now employed, and in three minutes the muscles began to relax, soon after which he sank into a sound sleep. The effect was kept up three quarters of an hour, and when he awoke he was quite rational, and conversed with those around him. His general health now improved, but the finger continuing much swollen and painful, was removed six days after the administration of the chloroform. His recovery was perfect.”—*Lancet*.



# THE DENTAL NEWS LETTER.

JANUARY, 1849.

We discovered, but not until we had sent off our entire mail list, that some of the last number, (first No. Vol. 2,) Dental News Letter were incorrectly bound. We regretted that we did not see it sooner, but, as the only amends we can make, we desire to be informed where incorrect copies have been received, and we will return a perfect number.

*A Treatise on Dental Surgery, and on the Preservation of the Teeth and Gums.*—For the use of families. By C. H. Dubs, Dentist, Natchez, Mississippi.

This seems to be the best possible way for the dentist to gain the confidence of the public, as it exhibits to some extent the author's ability and qualifications. This little pamphlet contains much information, and will prove useful to those for whom it is designed.

*Ambler's Journal of Dental Operations.*—We have before us a copy of the above useful work, and are pleased to find, as an improvement over those published in former years, that the date is left blank; they can therefore be used as well for any future year as for the present.

For facility, a saving of time, and admirable arrangement for keeping correct dental accounts, it is unsurpassed, and the price, too, only one dollar.

In reply to a correspondent, we answer, we must receive all communications intended for publication on or before the first of the months in which the News Letter is published.

In consequence of a demand for palladium for plates, we have ordered from England a supply, which we expect to receive in a few weeks, when, with our stock of gold, platina and silver plate, we will be enabled to supply all tastes.

We notice a Dentist of Durham, England, has lately used gutta percha, for the manufacture of sets of gums for artificial teeth. The mode he does not give.

*New York Dental Recorder.*—The January number of this periodical is just out, filled, as usual, with matters of interest to the profession. The manner in which the editor reviews some little works on dentistry is truly refreshing.

T. J. W.'s communication is just received, but too late for publication in this number. It will, probably, appear in our next.

## CHLOROFORM.

Among the various uses to which this article has been put, (not the least of which is driving steam engines,) we notice that of the cure of delirium tremens. This we conceive to be of some importance, and well worthy attention ; but the most important, just now, is the success that has attended its use in cholera in England. Mr. Hill, a surgeon, attached to the Peckham Hospital, England, says he used it in ten cases of epidemic cholera with complete success, six of the patients being perfectly cured, and the four others in a state of convalescence. Two patients sunk, but these were already in the last stage when it was applied. He says :—

“ Our habitual mode of treatment is to put the patient in bed between very warm blankets, to give him a glass of brandy in hot water, with sugar and spices ; to rub him with warm flannel dipped in a mixture of soap, camphor, tincture of opium, and extract of belladonna ; to apply to the whole surface of the body bags filled with hot bran, to put the patient under the influence of chloroform by inhalation, and to keep him under the gentle influence of it as long as the bad symptoms continue to reappear, which often happens when the effect of the chloroform ceases, and the patient recovers his consciousness. It is necessary to give, at short intervals, small quantities of brandy and water for nourishment, arrowroot, clear or with milk, and for drink milk and water, or soda water with a little brandy, to abstain from every thing else in the form of medicine, and trust to the efforts of nature to escape the infections of the disease.”

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As we have had many inquiries in reference to dental chairs, we will endeavor to give a description of the kind we get up, and have for sale. They are made of mahogany or black walnut, as may be desired, covered with scarlet figured plush. The seat being made to raise by a crank extending out from under the chair ; thus, any elevation of the seat may be obtained. The back falls by means of two quadrants, both being controlled by raising one ; thus, obviating the necessity of going behind the chair to let the back down. The head-piece raises or falls by means of a quadrant, and a part of the head-piece slides upwards and downwards, and horizontally ; the latter movement enabling the operator to bring the head of the patient close to his breast, by which he may operate without stooping. They are very strong and handsome, and combine all that is requisite in a dental chair.

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When we commenced the use of the rivet-headed pins in the manufacture of our teeth, we fell into an error, which was in making the heads too large ; this we have corrected, and we now think we get all the strength and advantages possible from the use of them.



### PLUGGING FORCEPS.

As an article which is fast coming into use, we may mention plugging forceps. Some of our city dentists are now using them with much success, as they greatly facilitate the packing of the foil, in addition to the firmness which may be given the filling by their use. A set comprises six instruments. We are now getting up a stock of them. We have also a lot of superior "water of ayr" stones, in thin, suitably-shaped pieces, for rubbing down inequalities in plates. Also, Ambler's "Journal of Dental Operations."

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### REMOVAL.

In consequence of the demand for increased room and facilities in our business, besides our desire to be nearer the business part of the city, we have finally consummated an arrangement which we have long desired, and by which we will be enabled to accomplish our purposes.

We are now fitting up a place which will combine every advantage desired, and we expect to move into it in February next. The location is No. 120 Mulberry street, one door below Sixth street. Being but one square from Market street, our western, south-western and southern customers can entrust their orders to gentlemen from their respective places, with the assurance that they will not be taxed in time or trouble to find us.

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### SUCCESSFUL OPERATION AND TREATMENT OF THE ANTRUM MAXILLARIA OF THE RIGHT SIDE.

BY CHARLES H. DUBS, D. S.

*Description.*—The patient, Dudley Hunt, in his 15th year of age, had been afflicted with this terrible disease for eight months without any proper surgical treatment, his parents being under the impression that it was only the effect of a severe cold. He was first brought to me on the 3d of April, 1845, and on examination I found there was considerable expansion of the bones of the cheek and nose of the right side. The palate bone protruded much into the mouth, and the extension of the bones was so great as to produce an entire obstruction of the right nostril, also the swelling so as to raise the floor of the orbit, pushing the eye so far out of its socket as to cause total loss of vision on that side. There was a fistulous opening at the prominent part of the molar bone, of a fleshy nature, from which pus was issuing, and communicated with an opening in the gum opposite to the anterior bicuspid tooth of the right side. There was also another fistula near the canthus of the eye opening into the right nasal cavity.

*Operation and Treatment.*—The first and second superior molars being much decayed in the crown, I extracted them, and perforated through the socket into the cavity, causing considerable

pain ; on the entrance of the trocar, a large quantity of greenish and yellow pus discharged freely from the opening, and was assisted by several injections into the sinus, which our youthful sufferer bore admirably, and the flow being very copious, in a little time afforded him material relief. After this, a cool, emollient poultice was applied over the whole surface of the affected part.

*April 4th.*—Very little pain this morning, and the swelling somewhat subsided, but found the external openings, as also that in the mouth, suppurating profusely, and emitting a very fœtid odor. On this account, I injected the sinus with a weak solution of chloride of soda in the proportion of 1 to 12 of aqua rosa, lukewarm. This gave very little pain, and was followed by much coagulated lymph, and hard curdled matter. The emollient poultice of slippery elm was continued, morning and evening.

*April 5th.*—On examination, I found the parietes of the alveolar much decayed, and also the external plate of the jaw. My patient was so timid that he required much persuasion before he would submit to another operation. I now removed the whole decayed part of the upper maxillary, extending from the posterior bicuspid near the socket of dens sapientia, and thus formed a proper outlet. Occasional injections into the sinus were followed by much lumpy and fœtid matter, along with a number of fragments of exfoliated bone. The nasal opening being completely closed, the solution found its outlet through the fistulous opening near the internal canthus. On examining this cavity with a probe, I found a large elastic substance, which I judged to be a fungus mass. This the patient refused to allow me to remove, so that I had to confine myself to the use of injections of a weak solution of the chloride of soda, tannin and myrrh, until the 8th of April, when he consented to submit to the operation. Though the parts were very much inflamed and painful, I cut the fungus entirely away into two pieces, which, together, were about the size of an egg. Much lumpy matter and small pieces of dead bone followed. The injections and poultices continued.

*April 9th.*—Removed a piece of exfoliated bone from the fistula near the canthus, it being a portion of the nasal bone. I also discovered the palatal bones in a state of necrosis ; emollients continued.

*April 10th.*—I made an incision from one fistula in the cheek to the other, in the form of a triangle, which enabled me to remove several pieces of bone that were exfoliated, and among them was part of the malar and nasal bones. I now gave injections of sulphate of zinc dissolved in warm water, thrown into the opening, and the lotion of chloride of soda into the sinus, and was much pleased to find the nasal opening pervious.

*April 14th.*—The diseased parts have been discharging freely, and the patient doing remarkably well up to this time.

*April 17th.*—Removed more loose bone from the opening in



the cheek. The suppuration is decreased, the patient is recovering his spirits, and the sight of the eye has much improved. For a great number of red spots on the face, I prescribed a bottle of Sands' sarsaparilla, injections and emollients continued.

*April 23d.*—The diseased parts continue to improve, and the red spots on the face have entirely disappeared.

*April 25th, 28th and 30th.*—Removed more dead bone from the superior maxillary, and palatal bones. Usual injections, &c., continued.

*May 2d, 7th.*—The health of the patient and diseased parts still improving; the latter suppurating freely. On examining the lower jaw of the left side, I discovered a hard tumor directly below the first inferior molar, which was decayed, and very tender and painful to pressure; I therefore extracted the tooth, and the hard tumor vanished in a few days.

*May 8th, 9th.*—The diseased parts continue to suppurate, and on examination I found more dead bone which required to be removed; I accordingly operated with great care, and extracted a large bone, being part of the lower orbital plate, also several pieces of the nasal plate, the os spongiosa of the right nostril, and the os unguis. The injections of sulphate of zinc and tincture of myrrh and the emollient poultices continued.

*May 10th, 12th.*—I found my patient much improved, his eyesight being much strengthened and relieved of pain, swelling quite reduced, the puncture in the alveolar is now quite free, and from which there is a copious flow of pus, and the opening on the cheek has assumed a granulated appearance. For the inflammation of the eye, I prescribed a lotion of sulphate of zinc, acetate of lead, tincture of opium and rose water.

*May 13th to the 18th.*—The foregoing treatment was continued up to this date with decided improvement.

*May 19th.*—To-day I commenced injecting the sinus with diluted port wine, from which the patient did not experience the slightest pain. The discharge of pus is but trifling, and the secretions are rapidly assuming a normal condition. As my patient is desirous to go into the country for a few days, I prepared for him a proper astringent lotion for the mouth and throat, and removed from his teeth the tartar which had accumulated in considerable quantity. I also directed the emollient poultices to be continued, and moderate pressure with the bandage to be made over the diseased parts.

*May 22d.*—My patient returned home after three days' absence, much improved in every respect—same treatment continued.

*May 26th.*—On examination this morning, I observed that the palate bone of the right side remained considerably swollen, and on probing the same through the alveolar puncture with a curved probe, I discovered an abscess about two inches long attached near the cribriform bone. This I at length, and with much diffi-

culty, succeeded in extracting, and found it to be shaped like and resembled a cocoon, which, on being opened, was found filled with pus and flocculi. I now injected the parts with the lotion of sulphate of zinc and tincture of myrrh.

*May 27th to the 30th.*—My patient absented himself by a visit to the country. He returned home on the 15th of June, and on examination I found all the disease entirely removed, the punctured opening in the alveolar remaining open and free from discharge.

*July 1st.*—To-day I gave the sinus several injections, and finding the parts perfectly recovered, I scarified the gum at the opening in the mouth, and brought the same in contact, and applied such necessities as to keep them united.

*July 6th.*—The incision in the gum I found entirely closed, and all traces of this truly dreadful and extensive disease of the antrum maxillaria and adjacent parts are completely removed.

*April 28th.*—I have seen my patient several times lately, and he still continues to enjoy perfect health, there never having been the least disposition in the disease to return.

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#### POLYPUS OR FUNGUS OF THE GUM.

This disease is essentially hypertrophy of the gum, arising from mechanical irritation. If a tooth decay away on one side below the level of the gum, leaving a sharp margin in contact with the gum, a tumor frequently forms from the gum, spreads into and partially fills up the hole of the tooth, or the vacancy between the two decaying teeth. The tumor is usually composed of dense fibrous tissue, covered with epithelium; is almost insensible, unless ulcerated, when it becomes very painful. If the tumor be removed, it will grow again and again, unless the tooth be removed, when it will suddenly disappear. The tumors show, on dissection, an undulating surface of fibro-cellular tissue, covered by a thick layer of epithelium.

The best application for this troublesome state of the gum, is sulphate of copper applied every day or two.

#### BLUE GUM.

Dr. Watson, in his lectures, when treating of colica pictonum, says: "Very recently a most curious symptom, pathognomonic, I believe, of the presence of lead in the system, has been pointed out by Dr. Burton; and, now that it has been pointed out, one can scarcely understand how it escaped us so long. It is a blue or purplish line running along the edges of the gums, just where they meet the teeth."\*

Mr. Tomes is of opinion that the blue gum may be produced by other metals beside lead, especially mercury. He also says the

\* Dr. Watson's Lectures on the Practice of Physic.



continuance of tartar on the teeth is necessary to the continuance of this peculiar discoloration. If the whole of the tartar be removed from the neck of the tooth, the blue tinge on the gum will gradually fade, while its intensity will be preserved about the teeth on which the tartar is allowed to remain. This peculiar state of the gum, however, does not seem to be of so much importance as to require us to occupy any more space with the subject.

#### TARTAR A SALIVARY CALCULUS.

The saliva, together with oral and pulmonary mucus, holds in solution various salts, which are precipitated in greater or less quantity upon natural or artificial teeth, in those situations where the solvent fluids remain at rest. Epithelial scales, and other extraneous matters, that may be floating in the oral fluids, or entangled between the teeth, become impacted in the precipitated salts, and thus contribute to form the concretion usually called *tartar*! And, in addition to these, infusorial animalcules are met with in recent tartar, and their remains in that which has been dried.

Simon says—"Tartar on the human teeth consists of earthy phosphates, epithelium scales, a little ptyalin, and fat; and when examined under the microscope, there are seen abundance of pavement epithelium and mucus-corpuscles; and, in addition to these, numerous long acicular bodies and infusoria of the genera *vibrio* and *monas*."

Careful daily brushing will do much to prevent the accumulation of tartar on the teeth, but should it accumulate, it must be removed from time to time by instruments fitted for the purpose.

Tooth powder that will dissolve the *tartar*, will dissolve the teeth, and therefore may not be used.

#### ALVEOLAR EXOSTOSIS.

After a tooth has been pulled out, the vacated socket is gradually filled up from the bottom by bone. The growth of bone in the socket sometimes takes place without the previous removal of the tooth, and thus gradually forces the tooth out of its natural position, or out of the jaw. This happens more frequently to the central incisors of the upper jaw, than to any other teeth. You may sometimes find people in whom one tooth looks larger than its fellow, the one having been protruded by exostosis in the socket. In other cases, again, the teeth are forced apart by thickening of that portion of the alveolus which passes between them; or, they may be pressed outwards, or inwards, by osseous thickening of the inner or outer wall of the socket. The fangs of the displaced teeth are sometimes also shortened by absorption.

The disease will have its way in spite of treatment; hence, in most cases, treatment is but an addition to the evil consequent upon the malady. Eventually the tooth is forced out, or becomes so much displaced, or discolored from exposure of the fang, that its removal is necessitated.

## DISEASES OF THE GUMS.

*Acute Inflammation of the Gums.*—This disease is of rather rare occurrence, except as the consequence of specific agents administered for the cure of disease.

There are, however, a few cases on record of spontaneous salivation, in which the gums have been highly inflamed. I saw, a few months since, a case in which the gums of the upper jaw, and especially of the anterior part of the jaw, had become highly inflamed without any assignable cause; the pain in the mouth was great, and the flow of saliva excessive; the disease yielded to free scarification, astringents, and occasional aperients.

In salivation produced by mercury, the effect is first discernible upon the gums. Sometimes, previous to the coming of the metallic taste, and to the fœtor of the breath, and also to the soreness and discomfort which mark the influence of mercury on the system, the gums show indications that these conditions are about to appear—in fact that the patient will in a few hours be salivated. These conditions are,—the adherent portion of the mucous membrane of the gums assumes an opaque white color, contrasting strongly with the non-adherent portion, which preserves its natural hue or becomes more red. The free edge of the gums is moveable, but that part which lies over the edge of the alveoli is firmly tied down to the periosteum; and as the edges of the alveoli present a festooned line, so the whitened mucous membrane presents a corresponding festooned line. Again, where the mucous membrane is loosely reflected from the gum to the cheek, the natural color is preserved. The whiteness of the gum is produced by an increased secretion of epithelium, which, from being thicker and more opaque, renders the color given by the vessels to the subjacent tissue less apparent.

The surface of the mucous membrane, when deprived of the epithelium, is studded over with innumerable small conical elevations, or papillæ. The thickened epithelium is readily rubbed off the tops of the papillæ, while it retains its full thickness in the hollows between them; thence, if closely inspected, the gums will not be seen to present a uniform white hue, but a mottled aspect; and this, because the epithelium is thin over the papillæ and thick between them, and therefore more color will show through at one part than at another.

With the increased thickness there is a decrease of tenacity between the scales that form the epithelium, for the surface may be much more readily rubbed off than when in its natural state.

This curious and useful premonitory sign of coming ptyalism, was, I believe, first noticed by Mr. Corfe; and if you wish to make use of this indication in your practice, it will be necessary that you should carefully note the state of the gums at the commencement of the mercurial treatment, for it is quite possible that other agents may produce a similar state of the gums, and that such may exist previous to the exhibition of mercury.



## THREE PREMIUMS.

GOLD MEDAL.



BRONZE MEDAL.



We placed some of our late manufacture of teeth for exhibition in the late Fairs, recently held by the following Institutes :

American Institute, New York.

Franklin do. Philadelphia.

Maryland do. Baltimore.

And to the Committees on Teeth at the Philadelphia and Baltimore Fairs, we addressed the following communication :

TO THE COMMITTEE ON ARTIFICIAL TEETH.

We would respectfully call the attention of the Committee to the improvements which we claim to have made in the teeth now on exhibition in the fair of the Institute :

1st. Their general appearance, and particularly the enamel surface of the front teeth, their corners being rounded, and otherwise more nicely imitative of the natural organs.

2dly. The Bicuspid—Their articulating surface, their fulness, and their adaptation to the place for which they are made, viz. first and second, the first being a little thinner than the second, especially with those designed for the lower jaw.

3dly. The Molars—Their grinding surface, giving a perfect, broad, articulating surface, from the fact that the outer corners of the upper molars project, while there is a corresponding depression on the same corners of the lower molars, thus obviating entirely the necessity for grinding the surfaces to obtain a fit. The molars and bicuspid being slightly oblique on their side, can be brought into circle without grinding, or presenting that square appearance which many do.

The teeth are all made with rivet-headed pins, or platina's,

# THE DENTAL NEWS LETTER.

Vol. II.

APRIL, 1849.

No. 3.

For the Dental News Letter.

## PLUGGING TEETH.

MESSRS. JONES, WHITE & Co.

*Gentlemen* :—I will now proceed to give a description of the instruments used in plugging teeth. But from the great variety of shapes and instruments in use for plugging, it would seem that no two dentists could adapt themselves with facility to the use of precisely the same kind of instruments ; and that each should consider his own best suited to all, is not unnatural. That every dentist should be capable of adapting instruments to suit his taste, and peculiar method of operating, is necessary, because the shape of the instrument will much depend upon the position which the operator assumes in operating, the construction of his chair and manner most easy of approaching the patient. Therefore, we do not wish to be understood as urging our own as best suited to all, but we will give a numeral description of some of them and in the order in which they should be applied in certain cases. Beginning first, with those commonly used for plugging the front teeth on their approximal surfaces, and numbering them 1, 2, 3, &c., in the order in which they are to be used ; so that if they are applied in this manner by the learner, he will produce a certain inevitable result.

No. 1, is bent near its extremity to an angle of about eighty degrees, and is curved upon itself laterally, so as to form what are generally termed right and left pluggers. The curve should be sufficient to allow the point of the instrument to fall to the bottom of the cavity with facility, when rotating the shaft of the instrument on its axis, when entering and packing away the gold in the cavity, without the convex part of the instrument touching the adjacent tooth. There should be larger and smaller sizes, to suit the size of the division between the teeth and the cavities. These instruments can be used to advantage in many parts of the mouth.

No. 2, is bent to an angle of about eighty-five degrees, about one-fourth of an inch from its extremity, but is flat and straight with a kind of rib, or elevation running along the middle, which



gives it the appearance of a flattened spear. But instead of it actually terminating in a spear point, it terminates flatly with an edge in the direction of the shaft of the instrument. This edge is slightly serrated to prevent it cutting the gold too much while packing.

No. 3, is bent at about the same angle as No. 1, and the one curved right and the other left, but instead of presenting a right and left flat surface, it presents an edge which is serrated, in order to better carry the gold into the cavity, and to require less force to produce the same effect upon the surface of the plug while packing, than a broader surface.

No. 4, is bent at an angle of about twenty degrees, more or less, to suit different cases, terminating nearly at an edge, which is also serrated. This instrument can be used for packing the gold along the lower boundaries of the cavities of the approximal surfaces of the superior front bicuspides, and some of the superior molares, when much decayed, or the facial cavities of the superior molars; but when bent at an angle of about eighty degrees, forming No. 5, it can be used for the inferior molars.

No. 6, is a strong, doubled-curved, flat, oval burnisher; each curve is at an angle of thirty degrees, and half an inch long; the last arm of the angle is slightly curved, so as to form a convex and concave surface laterally, making a right and left instrument; this instrument can be used with great facility upon the approximal surfaces of nearly all of the superior teeth, as well as some of the inferior, by resting the thumb of the right hand against the tooth which is being plugged, or one adjacent.

All instruments for packing a plug, should be wedge-shaped, so as to pack laterally as well as downwards,\* and presenting as small a surface to the plug as possible, so that the greatest effect may be produced upon a given surface with a given power. The variety of instruments for packing and burnishing plugs, can be obtained at the instrument makers, generally, and their adaptation to various positions and purposes, must depend partly upon the ingenuity and judgment of the operator.

#### MANNER OF PREPARING THE GOLD.

When the cavity is prepared, and the instruments intended to be used for introducing the plug, are placed within convenient reach, then prepare the gold in such a manner as may be deemed proper for the case; say for a small sized lateral cavity, No. 4 gold cut in strips, from one-fourth to one-half the breadth of the leaf—rolled, or folded and twisted to form a kind of rope, but not to be crimped so as to break the leaf in either way; on the contrary, it should present as smooth an appearance as possible. Some suppose, the more roughly the rope is twisted, the better

\* The writer believes he was the first to apply the sharp wedge-shaped instrument for plugging teeth, having used them as early as 1838.

one fold, when put in the cavity, will hold upon another. But not so; besides, it makes a porous plug, and when the leaf is much crimped and broken, it cannot be rendered solid without immense pressure: again, it will not receive a fine polish, as small particles will constantly burnish off.

For facial cavities, No. 6 is, perhaps, best, prepared in a similar manner as described above, as it makes a stronger plug, and there is better opportunity for applying more pressure, in packing, in such cases. Where a facial cavity is large, a leaf of No. 4, folded over a piece of watch-spring, or thin burnished steel, of about an eighth of an inch wide, in the form of a tape, which folded again upon itself, so as to form a kind of block, as many of which as may be desired, may be placed into the bottom of the cavity, and firmly packed. The gold being folded smoothly in this way, is already nearly as solid as it can well be made, and very little pressure is required to render it entirely so. A deep cavity partially filled, so as to make it shallow, is desirable, which can then be finished with the rope in the usual way. This kind of block, nicely folded, is indispensable and invaluable for building up the broken down sides of cavities, or placing along the gum of any large cavity, because the dampness cannot permeate it, as well as the gold rolled in the ordinary manner, and in filing and finishing, it will not crumble away. It should be our constant study to put the gold in such a condition before introducing it into the cavity, as to be rendered solid with the least possible pressure and in the shortest space of time. In introducing the gold into a shallow cavity, say a little deeper than the enamel, one end of the rope should be placed firmly against one side, and bottom of the cavity opposite the point at which we intend to finish. Then catching the roll outside of the cavity, and folding it upon itself with the instrument, and carrying that point down to the bottom of the cavity, also, leaving a knuckle a little without the orifice. This continued alternately, and pushing the one fold against the other powerfully, until the cavity is filled, using for the last one or two folds, a small instrument. This can commonly be accomplished in the cavities of the front teeth with No. 1 instrument. Now, these knuckles, or convolutions, may be projecting in the cavities of the approximal surfaces against the adjacent teeth, so as to prevent getting fairly upon them with the same instrument; if so, use No. 2, which, being sharp at the edge, and wedge-shaped, will enter between the plugs and the adjacent tooth, without displacing the gold from its previously fixed position, and compress the plug sufficiently to admit of applying the sharp right and left packers, No. 3, with which the plugs can be completely packed. The same method precisely, is adopted in introducing the gold into the facial cavities of the superior and inferior molars, using No. 4 for the superior, and No. 5, 2 and 3, as the case may be, for the inferior; and for packing the gold of either jaw,



use the ordinary packers, for back teeth, with small points slightly serrated, to prevent slipping. Now, it is exceedingly important that the gold and the cavity should be kept perfectly dry during all this part of the operation, and in the front teeth especially, because the dampness will prevent the fresh dry surfaces of the gold and cavity from adhering well.

If the saliva gets in, it cannot be entirely pressed out, however powerful the pressure may be, because the hardening of the gold upon the surface of the plug, will close up the pores there and prevent the water from escaping from those below; besides, it will undergo chemical change, and discolor the tooth and plug. Various contrivances have been resorted to by different operators, for this purpose; Desaborde's tongue holder, for depressing the tongue, and Lawrence's, which is for a similar purpose, and very useful. Some, also, use a kind of truss with one pad under the chin and one on the tongue. Even the syphon has been applied to draw the saliva from the mouth. A very simple contrivance of mine, whilst operating on the lower teeth, is to fold a piece of muslin around a light watch-spring, about two and a half to three inches long, as the case may require, sufficient to make a roll about as thick as the little finger, and place it around the jaw, between the tongue and margin of the gum. This not only absorbs the saliva, but compresses the sublingual and maxillary ducts, and prevents its rapid secretion, and the elasticity of the spring forces the roll against the gum, and prevents the saliva from flowing between the teeth while operating upon their approximal surfaces, as well as any other parts of the them. And as the back teeth of the inferior maxillary, commonly incline a little inwards, they favor the retention of it in position. If, at the same time, a roll of cotton, lint, or napkin be placed between the cheek and the superior teeth, to absorb the saliva there, as well as to compress the stonion duct, and an additional roll compressed between the inferior teeth and cheek, a complete state of dryness can be maintained long enough to accomplish the operation of plugging any of the inferior teeth, back or front. For protecting the back teeth of the superior maxillary, placing a roll of cotton, or muslin, between the gum and cheek, is frequently sufficient, but when saliva comes in the way from the patient involuntarily touching it with the tongue, apply the tongue holder, or roll a napkin into a ball, and place it between the roof of the mouth and tongue. A plan which we practice a great deal in operating upon the front teeth,—as it not only keeps the tongue down but prevents the breath from dampening the gold or cavity, at the same time that this is applied, for the front teeth—is to place a thin roll of muslin between the lip and gum. This will suffice for general directions, but each operator must exercise his judgment in adapting an expedient for special cases. For drying the cavity, some prefer lint, others cotton, paper, tape, &c. We use tape or cotton, as the case may

be, forced in hard enough to absorb the principal part of the dampness, and depend upon scraping the cavity dry, as that process leaves a fresh surface, to which the gold best adheres. After the gold is well packed\* in the cavities, file and scrape the rough surface of the plug, pack and burnish alternately, with a smooth instrument, until the surface is level or flush with the margin of the cavity, always having filled the cavity full enough to admit of this without reducing it below the margin. Very frequently we do not file the tooth as much as we ultimately intend it shall be, that after the plug is packed we may file the tooth so as to be sure that the plug and margin of the cavity shall be perfectly flush, unless it be in some few cases where it is desirable to have the plug to project above the surface of the cavity, but in all cases, the marks of the instruments should be filed† out of the surface of the plug. After this is accomplished, use between the front teeth, emory paper, or pumice, finely powdered, rotten-stone and rouge,‡ and burnishing alternately, until the surface is as perfect, and dense, and mirror-like, as a well polished gold plate. It is indispensable that the surface of the plug shall be impervious to air and dampness, and not loose particles of gold by brushing or during mastication. The Scotch stone of the jewellers, can be used with advantage in many cases, in dressing the surface of the plug, previously to the use of the rouge, but all those substances must be well cleaned off of the surface of the plug before using a burnisher as they will injure the instrument, and prevent the production of a perfect polish. For filling a nerveless tooth, we are in the habit of rolling a piece of heavy gold-leaf into a solid and pointed roll, which can be done by cutting the leaf into a point and passing this down the roots of the tooth as a flexible wire, and then following it with a small plugger, especially for that purpose, adding more gold until the nerve cavity is completely filled, and lastly, burnishing this surface as hard as the filling of the external cavity.

Believing, gentlemen, that I have said sufficient to direct the young learner in the general operations of plugging, I will conclude by thanking you for the flattering manner in which you have been pleased to receive this short series of papers, regretting that they are not as deserving as I could have wished them to be, which has resulted from a want of as much time as I had originally intended to devote to them,

I remain yours, truly,

J. D. WHITE.

\* We sometimes use for packing the buccal plugs, a forcep constructed for that purpose, specimens of which can be seen at Mr. H. G. Kerns, No. 293 Market street.

† Mr. Murphy, No. 110 North Fourth street, can furnish the different kinds of plug files which we have in use, as it would be too tedious to describe them.

‡ Those three last named articles can be applied either with a piece of tape or hickory wood.



For the Dental News Letter.

MESSRS. JONES, WHITE & Co.

In looking into your Dental News Letter of October last, I noticed a statement made by Dr. Fleming, of Harrisburg, Pa., instancing the case of a gentleman in that place (Mr. S. M.) having, when about three or four years of age, the right central incisor knocked out by the point of a pitchfork, and that in the course of two or three months another tooth presented itself, which grew down and supplied the place of its predecessor. Not claiming much physiological knowledge or experience, but having paid some attention to matters of this character during the last ten or twelve years, and witnessed so many egregious errors and misconceptions relative to cases of this kind, that I am inclined to the opinion that THIS is one among the many instances where nature has baffled the conception. I have no hesitancy in believing that the vacancy was filled, but cannot conceive how it could have been filled physiologically speaking, by an "entire new production." With due deference to the statement given and the opinions of others, it is very evident that this vacancy may have been filled by other means much more rational and physiological. And one of the means I shall mention is, by a rapid inclination of one or both the teeth adjoining the vacancy; and by this approximation the vacancy became closed before much notice was taken of it, either by the young subject, (Mr. S. M.) or any other with whom he may have been associated. In consequence of which it may have been taken for granted that it was filled by a new production. This would evidently give the inclining tooth an abnormal appearance. Its position, instead of being perpendicular would be oblique—the corner of the cutting edge inclining into the vacancy, being much shorter than the other. And I hope this conclusion will not be considered uncharitable to the statement given, either by Dr. F., or the gentleman, (Mr. S. M.) It is by no means unreasonable to conclude that the latter gentleman may have been mistaken as to the operations of nature at the early period of four or five years of age; for, we observe many mistaken notions even among parents themselves, as to whether their children have or have not shed such and such particular teeth. Such are the wonderful changes constantly going on in the mouth at this period that most persons, no matter how intelligent otherwise, will be liable to misconstrue, pervert or misunderstand the manner in which nature carries on her operations, unless he be acquainted with the formative process, together with the anatomy and physiology of the teeth. My own opinion is, that the production of a secondary deciduous tooth cannot be accounted for upon any sound physiological principle.

Nature, it is true, has in many instances great restorative powers; but that she has such germinative and formative powers as to produce an entire new member when the means of that formative

process is removed, is untenable, and without an example in the recuperative powers of nature.

For further illustration : the rudiments of the temporary teeth are first discovered in a continuous pultaceous cord, filling a semi-circular groove in the jaw. This groove is, together with the pulp it contains, gradually divided by elevations of transverse portions of bone into as many divisions as there are teeth in the jaw. Each of these constitutes the rudiments of a tooth ; becoming enveloped in its own membranes which secrete the bony structure and the enamel.

These pulps prior to the secretion of the entire bony structure, give off cords that form the pulps of the SECOND or *permanent* set. And thus ends the natural germinative and formative process. And the original rudiments are thus entirely disposed of. Then, can it be supposed, from the loss of a tooth at any age, that the restorative powers of nature are so great as to commence again a new work in the germinating process, entirely distinct and separate from the original rudiments. If we admit the doctrine of "a new production," we must also admit that it originated in the same alveolus, and that the absorption of its processes must have been subverted, which, I may say, is never the case. Upon the loss of a tooth—no matter how—an absorption of the gums and alveolar processes is the undeviating result.

The very short period in which this tooth developed itself, affords a strong argument against the doctrine of a new production. The period for the formation and developement of the temporary teeth must be admitted to be ten or eleven months, and that of the permanent ones between five or six years. But in this case we have the pulp formed, with its necessary membranes, secreting the bony structure and enamel, and all within the short space of three months. There must be something rotten in Denmark.

Another means by which this vacancy may have been filled, is by the premature appearance of the permanent tooth lying beneath and inward of the tooth knocked out ; which was occasioned by the absorption of the alveolar processes. But, if this latter conjecture be true, we are compelled to say, physiologically speaking, that Mr. S. M. must have been mistaken as to his ever having shed this particular tooth a second time. And it is more rational to come to this conclusion, than the admission of an entire new production. For, when we consider the great number of errors under which adult persons labor in matters of this kind, is it not quite plausible to conclude that Mr. S. M., when at six or seven (which is the probable age of his shedding the FIRST and cutting the SECOND set) may have been mistaken as to whether he again shed this particular tooth ? I think it much more plausible than "an entire new production."

I will here mention an instance occurring within my own observation, as one of the many cases of misconstruing the operations



of nature. Whilst performing some operations, sometime since, on the mouth of Miss B. C., of Autauga County, Alabama, aged about fifteen, I noticed the left superior cuspidatus to be somewhat irregular, and from its shape, size and color, was induced to believe it to be the temporary tooth that had never been shed. This, together with an irregular position of the adjoining lateral incisor, somewhat over-lapping the central incisor, induced me to advise its extraction. Assuring the young lady that the vacancy produced, would in a short time be closed, by the inclination of the adjacent teeth; and, also, the irregular incisor would fall back and assume a better position. Had I believed this tooth to be the permanent, and not the temporary one, I should have advised a different course to remedy the irregularity. However, my advice being consented to, the tooth was extracted. Very little absorption of the fang, if any, had taken place, but the entire tooth was much less than permanent canine teeth are known to be. Shortly after this the young lady visited her friends in Wilmington, N. C., where she remained about eighteen months. During this time my predictions, as to the closing up of the vacancy not being verified, she consulted a dentist who endeavored to close the vacancy by means of ligatures, but without effect. She returned home in the fall of 1847, without any diminution of the vacancy. Being now about seventeen, and thinking the vacancy rather conspicuous, she consulted a dentist in Montgomery, Alabama, who inserted an artificial plate tooth. Two or three months after the insertion, a new tooth made its appearance immediately beneath the plate, and is now a tolerably well shaped permanent cuspidatus.

I was in the neighborhood of the residence of Miss B. C. a short time after this tooth made its appearance, and soon discovered the rumor to be, that this young lady had cut a **THIRD** canine tooth, having had her **SECOND** one extracted for irregularity, &c. Now, it is true that seventeen is a late period for the cutting of a tooth of the second dentition; but from what has been already stated, it is evident that I am compelled to say, instead of this tooth being a third production it was only the second—the true permanent cuspidatus. This tooth being imbedded in the bone beneath the gum, constituted the principal hindrance to the approximation of the adjacent teeth when the ligatures were applied. The case showing great tardiness in the absorption of the fang of the temporary tooth, and a corresponding tardiness in the growth and rising of the permanent one, I think I am justifiable in saying that all those notions concerning *secondary deciduous*, or cutting **THIRD** teeth, &c., originate from a misconception of nature's mode of operating.

Excuse the simple style of this communication.

Yours truly,

THOS. J. WARD,

Wetumpka, Alabama.

For the Dental News Letter.

MESSRS. JONES, WHITE &amp; Co.

*Gentlemen* :—The January number of the “Dental Register of the West,” has lately reached me ; it contains an article speaking in the most *glowing* terms of my Odontalgic Drops, lately advertised in your “Dental News.” As the writer of it appears to be laboring under misapprehension, it becomes necessary for me to explain to him what he seems not to understand properly ; but others in the profession might not investigate more fully, and fall in the same error as the Doctor.

Without desiring *you* to take any part, *pro* or *con*, in the matter, allow me, gentlemen, room for a reply in your valuable paper.

Doing so you will much oblige,

Yours, very respectfully,

C. A. D. B.

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*Dear Sir* :—Your remarks on “Du Bouchet’s Nostrum,” published in the January number of the Dental Register of the West, are most welcome, they are witty, well written, and any one reading the article will for some time at least, remember Du Bouchet’s Odontalgic Drops. Unfortunately while setting forth so well their qualities, you seem not to have understood properly the tenor of our advertisement, or forgotten to expatiate upon our *terms* of sale of the recipe. Our modesty will not bear so much as you have condescended to bestow upon us, in the shape of titles, &c. ; we are very plain ourselves, and not desirous to engage in controversy in a language not our own, which we cannot twist into such agreeable phrases as you ; we might even say that our professional duties do not allow us to enter upon discussions which consume much time, but you would perhaps think all that a *feinte*. Returning to you our sincere thanks for the trouble you have taken in writing us into notice (for we feel indebted to you) would not answer either, because, perhaps but few would become aware of it, and we might be accused of ingratitude ; that is a prevailing evil from which we desire ever to be free ; therefore, allow us, through the medium of one of our lights, to offer a few strictures on the remarks you have had the goodness to make upon our Odontalgic Drops.

Your first remark might apply very properly to any article, good, bad, or indifferent, offered for sale before being tried, seen, or smelled ; but as no one is compelled to buy our recipe unless at his pleasure, after having tried it, and as we offer to send a sample of the Odontalgic Drops, free, gratis, for nothing, to any one applying for it, (postage paid) we see, indeed, no just foundation for your remark. We have always considered dentists as intelligent men, able to judge for themselves, and as in this matter they have an opportunity of testing the efficacy of the article offered to them, we are willing to abide by their decision.

We are still more of opinion that “its effects are instantane-



ous"—our daily practice has afforded us some ground to think so. Although you have discovered that extraction cures the tooth-ache, we do not choose to use steel balm as a first application, we would rather in all practicable cases, save a tooth; this is, perhaps, not the practice resorted to in the West, but I think many of our practitioners here will bear me out.

We do not state that it will destroy the pulp of a tooth, for when exposed, we usually extract the tooth, or destroy the nerve mechanically, or by means of arsenious preparations. That "it is harmless in its nature," we are perfectly satisfied, and although "ladies do not, as yet, use it in lieu of Eau de Cologne," and "children have, until now, only stopped (not unfrequently) crying upon its application," we still believe it a desideratum to the profession.

We did not in this case deem ourselves aiming at being regarded as great benefactors of our race; if you think we are deserving such honor, we must give in, and bow in submissive acquiescence to your superior judgment. We will, however, inform you, that our idea was, that in giving the profession an opportunity to test our Odontalgic Drops, (gratis) we might very possibly dispose of the recipe, and thus, likewise benefit ourselves in a fair way, giving each their money's worth.

We perfectly agree with your views as to secrecy, and did we live in another age, would probably have made this recipe public to the profession; but our efforts at regenerating the profession by setting the example, I fear would have proved useless, and, indeed, we cannot afford to give every thing away we must retain something to ourselves. We thought that our terms of sale, "unparalleled," as you would call them, could prove satisfactory to all.

As to your *à quoi bon*, I will say, that glancing at the letters received from all parts of the Union, from dentists requesting a sample of the Odontalgic Drops, we might suppose there was some use in it; but, perhaps, the poor fellows are like ourselves, laboring under a delusion, or have not heard of the extract of nut-gall. When they read your letter, *you* will be *the* benefactor of mankind.

That light emanates from the east, is true, but we regret that obstacles, such as unfairness of judgment, sometimes interpose to obstruct its beams.

In conclusion, dear Doctor, I shall feel happy to give you an opportunity to test fairly my Odontalgic Drops if you desire it, and remain under many obligations to you for your kind notice.

I subscribe myself, very respectfully,

Tout a vous,

C. A. DU BOUCHET.

To A. BERRY, D. D. S., Grand Gulf, Miss.

For the Dental News Letter.

REPORT OF THE COMMENCEMENT OF THE  
BALTIMORE COLLEGE.

The ninth annual commencement of the Baltimore College of Surgery, was held on the evening of the first day of March at the College Building.

Long before the hour arrived for the commencement of the ceremonies of the evening, the large lecture room of the College was crowded with ladies and gentlemen to witness the ceremony of conferring the degree of Doctor of Dental Surgery, on the gentlemen who had given satisfactory evidence to the Examining Committee of their attainments, and qualifications in the theory and practice of Dental Surgery, to be admitted to that honor.

At 7½ o'clock the Faculty of the College, and the Examining Committee, with the graduating class entered the room and was received with rounds of applause. After an impressive prayer by a Rev. Clergyman, the right to confer degrees, given the institution by the authority of the State of Maryland, was read in Latin by Professor W. R. Handy, when the following list of candidates was announced as worthy of the honors of the College, by Professor Harris, together with the subject of their Thesis, namely :

Charles W. Ballard, M. D., New York, Thesis—Physical indications of the teeth as connected with dental operations.

Philip H. Austin, M. D., Baltimore, Thesis—Abuse of Mercurial preparations, and its effects on dental formation.

M. A. Hopkinson, Massachusetts, Thesis—Causes and consequences of caries of the teeth.

J. U. S. Feemster, Tennessee, Thesis—Effects of diseased teeth on the general health.

A. A. Blandy, M. D., Ohio, Thesis—Nervous disorders.

J. H. A. Fehr, M. D., Kentucky, Thesis—General dental history.

J. F. Warren, Kentucky, Thesis—Medico-dental education.

R. R. Sams, South Carolina, Thesis—Dental Caries.

Albion Martin, Maine, Thesis—Extraction of the teeth.

Wm. S. Miller, Virginia, Thesis—Caries of the teeth.

M. Jerome Cherry, Baltimore, Thesis—Mechanical dentistry.

George W. Watkins, Georgia, Thesis—Professional Excellence.

Thomas Littey, M. D., Baltimore, Eruption of the teeth.

The degree of Doctor of Dental Surgery was then conferred on each by Dr. E. Parmly of New York, provost, with exceedingly appropriate advice.

The report of the infirmary and mechanical room of the College was then read by Professor Cone, who remarked at its conclusion, that from the above report, it would be seen that the gentlemen graduates were not thrown into practice to make their patients their school, and their failures their instructors.

The valedictory address was then delivered by Dr. E. B.



Gardette of Philadelphia, in which he defined in a happy manner obligation of patients and practitioners to each other. When Dr. Gardette had concluded, Dr. Philip H. Austin, on behalf of the graduating class addressed a few parting words to the Faculty and Examining Committee. Dr. A. spoke of the progressive character of Dental Science, as of science generally; and of the obligations resting upon every professional man to communicate the improvements which he had made, that young men, starting therefrom, might be saved years of toil, and go on to greater knowledge. He alluded to the advantages in this respect of the young Dentist of the present day; and more particularly the advantages enjoyed in this Institution, advantages which, while it opened for him a more immediate success, laid him also under obligations to the professors, to the College and to the community, which the students should never lose sight of. To the professors he said, "we feel, for their unvarying kindness, unwearied attention and generous forgetfulness of self interest, a debt of gratitude, which the class wish never to forget. With such kind feelings, we bid you, gentlemen, an affectionate farewell and pass forth into the world bearing before us that 'banner with a strange device:—EXCELSIOR.'"

After the benediction, the Professors, Examining Committee, Students of the College, and a few invited friends, retired to discuss a collation, served up in one of the rooms of the building.

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### AN ESSAY ON THE TEETH.—BY AUGUSTUS COOK.

[London: John Churchill. 1848. pp. 75.]

This is a little work on various subjects connected with the teeth, plainly and unostentatiously written, and which may prove useful, not only to the professional, but also to the general reader; for although we do not in general approve of the plan of writing books on the subject of medical practice, for the perusal of unprofessional persons, a little essay of this nature, on a matter with which every one may be reasonably supposed to be interested, if not familiar, can scarcely be objectionable.

Mr. Cook has touched upon several points appertaining to the pathology and treatment of dental diseases, and he has made some excellent and practical remarks, "On the disadvantages of inattention to the Teeth," and on their diseases, pointing out that, with ordinary care, much mischief may be obviated, much may be done to prevent gangrene in the teeth, care should be taken not to allow any very hot or cold liquid to come in contact with them. The water used to cleanse them should be slightly warm at all times. A too crowded state of the mouth should be relieved."

We recommend the treatise for perusal.—*London Lancet*, December 9.

# THE DENTAL NEWS LETTER.

APRIL, 1849.

## A DICTIONARY

*Of Dental Science, Biography, Bibliography, and Medical Terminology*, by CHAPIN A. HARRIS, M. D.—D. D. S., Professor of the Principles and Practice of Dental Surgery in the Baltimore College—Author of Principles and Practice of Dental Surgery, etc., etc. Philadelphia, Lindsay & Blakiston, 1849. Royal 8vo., pp. 780.

¶ We have been favored with a copy of the above work in advance of its publication, but have been able to give only a hasty glance at its contents.

Every dentist almost will at once surmise the character of such a work, and if properly prepared, its great utility; and they will as readily imagine the immense labor requisite to accomplish it, but that it has been accomplished, and with great ability, is here demonstrated; and we trust the profession will properly appreciate the labor, and avail themselves of its advantages. It is a valuable accession to Dental Literature, and should find a place in every dentist's library.

In glancing hurriedly over the work, we find the author has devoted considerable space to dental authors. His notice of them is quite *full*, but we cannot say as much of his notice of the manufacturers of teeth. This is a branch which has been too long neglected, and its claims to importance in a great measure overlooked, and we can see no good reason why the manufacturer should not be entitled to quite as much regard as the author of "a paper on mechanical dentistry," or, "an essay on the use of arsenic for destroying the nerve." We have no disposition to cavil, but on the contrary, desire to commend; yet we think we have reason to say thus much. However, as the objection may seem to come from us with a bad grace, we will say no more, leaving it to the judgment of the profession.

In justice to the author and publisher we must say the work is handsomely got up, on good paper and clean type, making altogether a neat book.

We have removed our Philadelphia concern from 273 Race street, to 120 Mulberry street, where we have a more central location, more room, a better light and increased facilities for manufacturing and selecting teeth.

Our customers will therefore bear in mind that our Philadelphia address is 120 Mulberry street, and at New York, 163 Broadway.



## ANÆSTHESIA,

*Or the employment of Chloroform and Ether in Surgery, Midwifery, etc., by J. Y. SIMPSON, M. D., F. R. S. E., Professor of Midwifery in the University of Edinburg, Physician Accoucheur to the Queen in Scotland, etc., etc., etc. Philadelphia, Lindsay & Blakiston, pp. 248.*

This work has just been handed us, but not in time for as full a notice as we should like to give it, still we can say this much, from the cursory view we have given it, that it treats the subject in a masterly and scientific manner, answering all the objections from every quarter, made to the use of chloroform, and giving it a decided preference over ether, particularly in obstetric practice. It contains the author's answer to Dr. Meigs, of Philadelphia, which is an able and argumentative reply. We commend the work to every one who wishes to inform himself on this very important subject.

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The Dental Messenger and Lancaster Annual Visitor, for 1849, by John McCalla, Dentist. This is a little work intended, we presume, for circulation among the author's patrons. It contains some good advice to those for whom it is designed.

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We have been informed that a person has been traveling through some parts of the country selling teeth as our manufacture, and representing himself as Mr. McCurdy, (one of our firm.) We wish to state here, that he is an imposter.

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We are requested by the author of the article published in the last number, entitled "Arsenic to destroy Nerves in Teeth," to say, that in the receipt given for the preparation of it, a mistake occurred, instead of 10 grs. arsenic and 15 morphia, it should be 15 grs. arsenic and 10 morphia.

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We have to record the death of an old dentist, that is, old in practice—a man of a good heart and generous impulses, and one whom we have long known. His loss will be severely felt by a large circle of acquaintances.

DIED, on Thursday morning, March 15th, after a severe illness, WM. RIPPERGER, in the 51st year of his age.

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We have received from Mr. L. J. Chamberlin, of Pittsburg, a drawing of a drill for drilling the root in pivoting teeth.

Its peculiarity consists in the end, which is about half an inch in length, being cut longitudinally, like a rose-head drill, the thread somewhat spiral, making about half a turn in the half inch.

We give the following, which was adopted by one of our first dentists, as a very good system of office rules. If necessary, the prices for the different operations may be added :

“ 1st. Dr. — respectfully announces to his visitors, that he will always attend his waiting room, as soon after a call is made, as the nature of the operation he is engaged in will allow.

“ 2d. That in all cases no more time will be consumed in consultation, than their case necessarily requires, as the time so employed, is always at the loss of the patient engaged.

“ 3d. That when a portion of time is set apart to meet his patients, if they find it out of their power to fill it, they will inform him to that effect, in time for him to devote it to other use—and *in no case will he consider himself bound to fill an appointment, if the patient do not arrive a few minutes before the time to claim it.*”

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We think much information may be elicited by the noting down of all peculiarities, presenting themselves in the practice of every dentist; and with the hope of encouraging such a course, and inducing their publication, we will cheerfully publish every thing of this kind sent us, that is of the least importance.

There was a drawing accompanying the following communication, also a tooth, both of which prove the correctness of the assertions therein made.

### IRREGULARITY.

MESSRS. JONES, WHITE & Co.

I enclose a specimen of irregularity, which, although it may not be a novel case to you, is, I confess, quite a curiosity to me. It is a left inferior cuspidatus, and as you will see, has two fangs. I took it from the mouth of a lady, from which I extracted all the teeth preparatory to inserting a full set. There is no mistake about it being a cuspidatus, as I also extracted both bicuspidals from the same side. The crown, also, is evidence of its character.

I met with another case of irregularity last week, in which the cuspidati and the bicuspidals were transposed, as you will see by the sketch I send you, which I was induced to take from the very novel and singular appearance the mouth presented. The incisors were gone and the person called to have them replaced. The bicuspidals and cuspidati have quite changed places, and on one side the bicuspidals are both rather in front of the cuspidati.

Excuse my long description. It may be that neither of these cases will be interesting to you, as your opportunities for observation are so much more numerous than mine, but to me they are quite curious. The patient told me that the incisors were also irregular.

Truly Yours,

March, 1849.

C. W. HICKOK.



We would direct attention to the advertisement on the third page of cover, headed "Notice to Dentists."

We have reason to suppose that a good business could be done by one having the requisite qualifications.

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We give below an extract from a letter, which, barring the compliments to ourselves, contains some good thoughts.

We have long thought, and often said, that more sociability and interchange of sentiment would not only improve and elevate, but otherwise materially benefit the profession, and the reasons are obvious. But to the extract.

PROVIDENCE, La., Dec. 31st, 1848.

MESSRS. JONES, WHITE & Co.

*Gentlemen* :—I have just had the pleasure of receiving a number of your periodical, the Dental News Letter, and expect to be much edified and instructed by perusing its future numbers. It affords me much gratification to find that the members of our profession in my native city, (Philadelphia) are making bold efforts to elevate the profession to that standard which its importance justifies. It has long been a source of regret to me, that so great a want of liberality has prevailed among our professional brethren, that each one was left to grope his way with what little light he had ; but we can now hope for better things, which will raise us from the dark age of selfishness, and place us upon an eminence which will enable us to derive light from all the bright luminaries of the profession which now adorn our country.

Isolated as some of us are, it becomes necessary for us to have some medium through which we can be put in possession of the various discoveries which are daily being made in different parts of the country. The Dental News Letter promises much for the future on this head, and I hope, gentlemen, that you may reap a rich harvest as a reward for your spirited efforts in this praiseworthy enterprise.

Yours,

T. W. DUNN.

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We have been favored with a copy of the Valedictory Address of Dr. C. O. Cone, delivered to the Students of the Baltimore College of Dental Surgery, from which we make the following extracts:

"I feel sorry to admit it, but frankness compels me to acknowledge the fact, that the mechanical division of the profession, has been one of the greatest curses that has detracted from the dignity, and high position which our calling deservedly merits. This branch of the profession has often been the stepping-stone for the meanest quack to enter on a lucrative practice, pointing out most plainly the estimation in which the practice of this branch is held by the community.

“ On the practice of the mechanical department of the profession, there has generally existed an erroneous opinion, fraught with dangerous consequences. It has been supposed by many, that mere mechanical tact is all that is necessary in the branch now under consideration ; simply securing beauty of mechanical execution. This latter attainment I will admit to be very desirable, and even necessary ; but the mechanical contrivances which the dentist constructs in actual practice, are to represent, in their office, important organs, acting by means of delicate springs and parts, in unison with muscles and nerves of the living frame, plainly showing the necessity of a practitioner in this branch being thoroughly grounded in anatomical knowledge that is portable and ever at hand. Again, these mechanical substitutes are always demanded when a pathological change exists, which fact, itself, plainly answers the query, what acquirements should be possessed by the mechanical dentist on this scientific subject.

“ From a want of knowledge of the subject just named, and other attainments, dental mechanics have been more generally practiced on false principles, that of how much could be done, not making it subservient to its true and legitimate purpose of solving the problem of how little assistance nature should receive from our calling.

“ But persons who would not be trusted to mend the simplest machine, will, without hesitation, offer their services in dental mechanics, to remedy the structure of the body, alike unacquainted with its delicate strings, as well as the frail bond which holds each cord in harmony. \* \* \* \* \*

“ Mechanical dentistry embodies the general principles of the three chief arts, the creative, useful, and ornamental. ‘ If it gives not bread to the hungry, it enables the hungry to eat, and the dyspeptic to appropriate that bread which Providence has given him ;’ and when the resources of other branches of the profession can no longer be successfully administered, mechanical dentistry

“ ‘ Can remedy the ill,  
Restore her hopes and make her lovely still.’ ”

The above conveys a good idea of the importance which the Doctor attaches to the mechanical branch of dentistry, and the following is a fair sample of the figurative style in which the closing part of the address is written.

“ Gentlemen, others have gone forth before you, stimulated by the same hopes and high resolves. Some of these have toiled by the way-side—have harkened to the syren voice at the doorway of the Castle of Indolence : while others, having surmounted obstacle after obstacle, and trampled upon the mighty barriers that impeded their onward progress, are now rapidly approaching the pinnacle of professional distinction and human grandeur.



"With these you write your names, as companions upon the great high-road of science; and when you return, as we hope you may, after having 'hung your banner upon the outer wall' of quackery, and as the old war-horse is animated by the sound of the trumpet, so will we 'fight the battle o'er again,' by reciting the triumphs of skill and success.

"Time, the fierce spirit of the glass and scythe, rides on the bark of positive certainty, propelled by the motive power of creation. No power can stay his onward course. On, still on, he presses. His watchword is eternity. He knows not the chains of sleep or weariness, and night's darkness has no fetters to bind his onward course.

"When this all-pitiless tomb builder shall have whitened your locks, which are now glossy with the dews of life, and your countenances shall have been ploughed deep by his furrow of care, may I be able to look on your labors, and exclaim, 'these are my jewels.'

"Gentlemen, there are times when the tongue refuses to give utterance to the ready coinage of the brain; when imagination no longer soars, and when fancy pauses. Such a time is the present.

"I know not how to express my thanks in terms sufficiently cordial, for the attention with which you have listened to, and the interest you have exhibited in attendance on my instruction. I shall feel an individual interest in you, and each one takes my kindest wishes for his success and prosperity. I now take my leave of you as demonstrator, resigning that office, which, I trust, will be better filled by my successor."

We regret his withdrawing from the office, as there are but few who can fill it as ably as he has done.

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### COLLODION FOR FILLING TEETH.

Mr. Robinson, an English dentist, practises thus with the new article:—I have frequently applied the collodion in severe cases of toothache, arising from exposure of the nerve, with perfect success, when no persuasion could induce the patient to submit to extraction, either with or without the use of chloroform or ether. The method I adopt is, to let the patient wash the mouth with warm water, in which a few grains of bicarbonate of soda have been dissolved. I then remove from the cavity any foreign substance likely to cause irritation. After drying the cavity, I drop, from a point, the collodion, to which has been added a few grains of morphia; after which I fill the cavity with asbestos, and saturate with collodion. Lastly, over this I place a pledget of bibulous paper. In a few seconds the whole becomes solidified, and forms an excellent non-conductor of heat and cold at the exposed nerve. By occasionally renewing this, I have been able to effect a more durable stopping than with gold.

We cut the following from an advertisement to his patrons, by Dr. M. K. Bridges, of Brooklyn, N. Y.

“We are now using the premium gum teeth of Messrs. Jones, White & Co., manufacturers of New York, for which they received a gold medal at the last American fair. The introduction of these beautiful teeth has almost entirely done away with those cumbersome, ponderous blocks of brown earthen pottery-ware that have, in the last few years, distorted the visages, bridled the tongue, distended the lips and cheeks and choked the utterance of so many victims to tooth *experiments*.”

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### PREPARATION OF COLLODION.

M. Malgaigne has recently communicated to the French Medical Journals some remarks on the preparation of gun-cotton for surgical purposes. Several French chemists, at the suggestion of M. Malgaigne, attempted to make an ethereal solution of this compound by pursuing the process recommended by Mr. Maynard in the “American Journal of Medical Sciences,” but they failed in procuring the cotton in a state in which it could be dissolved by ether. It appears that these experimenters had employed a mixture of nitric and sulphuric acids; but M. Mialhe ascertained, after many trials that the collodion, in a state fit for solution, was much more easily procured by using a mixture of nitrate of potash and sulphuric acid.

For the information of our readers who may be disposed to try this new adhesive material, we here give a description of M. Mialhe's process for its preparation. It appears, from the results obtained by this chemist, that cotton in its most explosive form, is not the best fitted for making the ethereal solution;—Finely powdered nitrate of potash 40 parts by weight; Concentrated sulphuric acid\* 60; Carded cotton 2.

Mix the nitre with the sulphuric acid in a porcelain vessel, then add the cotton, and agitate the mass for three minutes by the aid of two glass rods. Wash the cotton, without first pressing it, in a large quantity of water, and when all acidity is removed (indicated by litmus-paper), press it firmly in a cloth. Pull it out into a loose mass, and dry it in a stove at a moderate heat.

The compound thus obtained is not pure fulminating cotton; it always retains a small quantity of sulphuric acid, is less inflammable than gun cotton, and it leaves a carbonaceous residue after explosion. It has, however, in a remarkable degree, the property of solubility in ether, especially when mixed with a little alcohol; and it forms therewith a very adhesive solution, to which the name of *Collodion* has been applied:

\* The common commercial acid will answer. When very weak, a longer immersion of the cotton is required.



## PREPARATION OF COLLODION.

Prepared cotton	-	-	-	8	parts by weight.
Rectified sulphuric ether	-	-	-	125	" "
Rectified alcohol	-	-	-	8	" "

Put the cotton with the ether into a well-stopped bottle, and shake the mixture for some minutes. Then add the alcohol by degrees, and continue to shake until the whole of the liquid acquires a syrupy consistency. It may then be passed through a cloth, the residue strongly pressed, and the liquid kept in a well secured bottle.

*Collodion* thus prepared possesses remarkably adhesive properties. A piece of linen or cotton cloth covered with it, and made to adhere by evaporation in the palm of the hand, will support, after a few minutes, without giving way, a weight of from 20 to 30 lbs. Its adhesive power is so great that the cloth will commonly be torn before it gives way. The Collodion cannot be regarded as a perfect solution of cotton. It contains, suspended and floating in it, a quantity of the vegetable fibre which has escaped the solvent properties of the ether. The liquid portion may be separated from these fibres by a filter, but it is doubtful whether this is an advantage. In the evaporation of the liquid, these undissolved fibres, by felting with each other, appear to give a greater degree of tenacity and resistance to the dried mass.

In the preparation of collodion it is indispensable to avoid the presence of *water*, as this renders it less adhesive; hence the ether as well as the alcohol should be pure and rectified. The parts to which the collodion is applied should be first thoroughly *dried*, and no water allowed to come in contact with them until all the ether is evaporated.—*London Medical Gazette*.

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ALLEGED NON-REPRODUCTION OF THE TEETH.

The teeth are said to possess in themselves no power of reproduction by which an injury can be repaired. This is not strictly true. The injury to which, in a state of nature and health, they are most liable, is wearing away of the masticating surface from use. The worn surface certainly is not renewed, but the teeth increase in density, and the pulp cavity diminishes in size by the formation of dentine, so that the actual amount of dentine is not diminished, while the density is increased. In each of these actions we may recognize a form of renewal, which in some degree compensates for the loss of abrasion. If the whole act of mastication is from any cause thrown upon two or three teeth, then these naturally, by the excessive use, wear away, till at last the whole crown is exhausted. Then again, they make an effort to resist the inroad of caries, as will be shown when we come to treat of that destructive disease.—*Tomes' Dental Physiology and Surgery. London Med. Gazette, December 15.*

## METHOD OF PREPARING THE NEW ADHESIVE PLASTER.

Take of pure nitric acid of the shops, f 3 ij.; commercial sulphuric, f 3 iij. M. and *allow them to cool*; pure cotton (the "drawn cotton" of the factories is the best), grs. xv.; press the cotton into the acids, and see that it is thoroughly saturated with the acids; macerate *thirty minutes*. Then wash the cotton in a glass vessel thoroughly, by means of agitation in repeated waters, and by squeezing, until you can perceive by the taste no remains of acid. Care should be taken not to divide the mass of cotton into many parts, as it will then be more difficult to pick it open equally, and thus fit it for equal and rapid drying, and perfect solubility. After picking the cotton into a light flocculent mass, I spread it thinly on a sheet of paper, and expose it to the direct rays of the sun. I suppose that drying by artificial heat would answer the same purpose, but, as yet, I have not tried it. This quantity of cotton may be put into three or four fluid ounces of sulphuric ether, according to the consistence which you may desire the fluid to be, it being rendered more thin by the addition of ether. The above quantity of cotton, with f 3 iv., will make a solution a little thinner than recently strained honey, and nearly as transparent. It has somewhat the appearance of a thick mucilage of gum arabic. This when dried in thin layers is transparent, and in fact, for some purposes, serves as an excellent varnish. I have observed, that, on standing, the more opaque portion of the solution subsides, and leaves a perfectly transparent stratum on the surface, which, though perfectly adhesive, does not dry as rapidly as the thicker and more opaque portion. It may be shaken before being used.

*Buffalo Medical Journal.*

## NON-MALIGNANT TUMOUR OF THE RIGHT UPPER JAW.

A Tumour was removed from a man, (Art. 21,) on his admission in St. George's Hospital on December 15, 1847. The tumour caused a slight protrusion of the cheek, and occupied the right side of the palate, from the first large molar tooth, and thence to the median line. Flat on the surface, it extended considerably into the mouth, and appeared red and spongy. In the situation of the anterior wall of the antrum it formed a projection as large as a good sized walnut. Above the alveoli it felt hard and resisting, in other parts soft and elastic. The teeth from the central incisor to the second molar, were loose and imbedded in the disease, the gums being soft and vascular. The general state of the constitution appeared perfectly healthy. The swelling first appeared, nine weeks before his admission, around the canine tooth, whence it gradually extended towards the median line of the palate, the roof of the mouth and alveoli.



During its progress it was twice punctured, blood only escaping, and after the first puncture it increased much on its original dimensions, and soon occupied the situation of the antrum.

The patient had as yet had no return of the disease.

The tumour was soft on section, and appeared to be made up mainly of an albuminous deposit.—*London Medical Gazette* December 8, 1848.

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## A COURSE OF LECTURES ON DENTAL PHYSIOLOGY AND SURGERY,

DELIVERED AT THE MIDDLESEX HOSPITAL SCHOOL OF MEDICINE.

By JOHN TOMES, Surgeon-Dentist to the Middlesex Hospital.

We have great pleasure in introducing to our readers the work of Mr. Tomes; since, if we cannot bestow on it unqualified praise, we can conscientiously recommend it as embodying the most elaborate exposition yet given of the late discoveries in minute dental anatomy and physiology, many of them the product of the author's own researches; combined with much excellent practical information, the result of a thorough knowledge of all that has been previously published on the subject by others, and of extensive and correct observation on the part of the author himself. The position which Mr. Tomes holds as the Surgeon-Dentist to a large hospital, has afforded him opportunity of obtaining extensive practical experience; and of these opportunities he has generally availed himself with equal zeal and good sense.

It is not many years since there was but one hospital in London, to which a practitioner in this branch of surgery was attached. Nor was there, even in the time of Mr. Fox—who lectured on Dental-Surgery for many years at Guy's Hospital, and who may be considered as the first who attempted the combination now happily not uncommon of the Surgeon and the Dentist—any recognition of that gentleman as holding such an appointment at that institution. We believe that his successor in the chair of dental surgery was the first who received any public appointment as an hospital Dental Surgeon; and the example then set by Guy's has since been followed by almost every other hospital in the metropolis.

When it is considered how extensive are the opportunities thus afforded, not only for acquiring a knowledge of the diseases of the teeth themselves, but for investigating the connection which so often exists between the abnormal or diseased condition of these organs, and a morbid state of others standing in a more or less intimate relation to them, it is to be lamented that so little has been done to clear up these ambiguous and obscure relations, to classify the complex and apparently anomalous cases which are so common and yet so little understood, and to force upon the attention of the professional officers themselves, as well as of the

students, and indeed of the profession at large, the importance and frequency of these secondary and relative diseases. It is surely to the well-educated and practical surgeon-dentist to a public hospital, that the profession has a right to look for the elucidation of these common and too much neglected cases ; and it is scarcely creditable to these gentlemen as a body, that they ordinarily satisfy themselves with the mere routine duties of their appointment, without an effort to use the only legitimate means of elevating their humiliated and degraded profession, to a rank and position which it can never otherwise be entitled to attain.

The work before us, although exhibiting a very creditable tendency in the right direction, has perhaps scarcely fulfilled, in this respect, all that might have been anticipated. The statistics of dental diseases, the symptoms and treatment of the morbid conditions of the teeth themselves, and of the parts immediately in connexion with them, are sometimes elaborately, and always satisfactorily treated ; but the remote nervous affections in various parts of the body, the constitutional derangements arising from these local causes, the discrimination, often difficult, but very often possible, between those affections which are, and other very similar ones which cannot be thus traceable,—these and many other matters immediately or remotely connected with the subject, have not, as it appears to us, received all the attention, even from Mr. Tomes, which his opportunities have demanded from him. Whether we have ground to anticipate any considerable improvement in the general state of the profession of dental surgery, from the leaven which in such small proportions is diffused over the crude, and heavy, and unwholesome lump, is a matter of scarcely hopeful speculation. If such a happy change should ever take place, it can only be by the renunciation of the captivating profits arising from the mechanical trade of the tooth-maker ; and it is perhaps doubtful whether it might not be better that all the operations on the mouth itself, even down to the filling of the teeth and the removal of tartar, should not be the office of the surgeon ; and the mechanical adaptation of artificial appliances for mastication, be exclusively the work of the mechanical dentist. Of one thing we are sure, that so long as the surgeon-dentist condescends to combine with the professional, this mechanical and artistic business, so long will he fail either to raise himself above the head of advertising quacks, or to elevate them, or any of them, to the status of professional character.

This is the incubus which hangs upon him, and presses him down ; and no wonder that it should be so, when the public fails to recognise the distinction. The only test which at present exists, by which the surgeon can be distinguished from the dentist, is the Membership of the College of Surgeons ; and that this is not infallible, is proved by two contrary facts, the one that Mr. Tomes is not a Member of the College,—the other that sundry advertising quacks are so.—*Brit. & For. Medico-Chirur. Review.*



## EXTRACT FROM DR. HARRIS' DENTAL DICTIONARY.

*Amalgam—Amalgama.*—A compound of mercury with another metal is called an amalgam. Within the few last years an amalgam of mercury and silver, either alone or in combination with finely pulverized silver, glass or pumice-stone, has been much used by many dentists for filling teeth, but it is thought by eminent practitioners to be the most objectionable material that has ever been employed for this purpose.

In the first place, being introduced in a soft state, it shrinks from the walls of the cavity in hardening, so as to admit the secretions of the mouth; consequently, instead of arresting the decay of the tooth, it often accelerates it. Secondly, the exposed surface soon oxydizes, turns black, and gives to the tooth an exceedingly disagreeable appearance; and thirdly, in the mouths of individuals very susceptible to the action of mercury, it is liable to produce salivation, and even in the best constitutions, it seldom fails to exert a morbid effect upon the alveolo-dental periosteum, gums, and mucous membranes of the mouth.

The above objections, it is thought, should, under *all circumstances* and in *all cases*, preclude the use of this article. Any tooth that can be substantially filled with any substance and remain in the mouth with impunity, can be filled with gold, which is the best material that can be employed in this operation.

Some practitioners contend, who, at the same time admit that it is the worst article that can, in ordinary cases be employed for filling teeth, that it may be used with advantage in "certain cases," but from the objectionable properties of the material, it would seem, that the opinions of such are erroneous.

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MODE OF ARRESTING HÆMORRAGE FROM LEECH BITES.—M. CARRE.

"I cut or tear a piece of agaricus of the oak (amadou or spunk) into excessively small fragments, the size of the head of a pin. Wiping away the blood from the bite I wish to staunch, with my left hand I open its edge on one side, and quickly thrust a bit of spunk into the opening; I then release the edge, and suffer it to close upon the agaric, which I maintain there with the finger, wiping away the blood as it exudes. When it becomes necessary to change the finger, care must be taken not to remove the bit of spunk with it. When coagulation has taken place, the hole is firmly corked. A warmed piece of silver coin (warmed to increase coagulation) may be substituted for the finger. A *torn* angular fragment is best."

Vidal de Cassis adopts the same measure, only he cuts his wedges instead of tearing them; and he applies a strip of agaric over all, which he maintains with a bandage.

[The method is promising, and merits a trial in these sometimes troublesome cases. The spunk can be got here at Dulluc's.—Ed.

*Jour. des Conn., Oct. '48*

# THE DENTAL NEWS LETTER.

Vol. II.

JULY, 1849.

No. 4.

For the Dental News Letter.

MESSRS. JONES, WHITE & Co.

In your "Letter" for last October, I gave an instance of what appeared to be the reproduction of a deciduous tooth. The case being a novel one to me, and the facts, so far as there having been a third tooth occupying the same location, being beyond all question, I felt, and still feel, a desire, as an humble inquirer after truth, to know whether any thing of a similar nature has been observed in the experience of others, whose opportunities for observation have been greater than mine. The case, in my judgment, seems to possess some interest, as throwing light upon the *rationale* of nature's operation in the production of those anomalous organs which come under the name of THIRD DENTITION.

In your April number, I find some reflections upon the above case, by Thos. J. Ward, of Wetumpka, Alabama, in which he very candidly gives it as his opinion, that such productions "cannot be accounted for upon any sound physiological principles," and hence concludes *this* to be "one among the many instances where nature has baffled the conception."\*

Now, I beg leave, respectfully, to differ with Dr. W., both in his premises and his conclusion. I believe, in the first place, that such productions *can* be accounted for, upon perfectly sound physiological principles; —and, in the second place, that, whether accounted for or not, instances of a very similar character do sometimes occur; and, moreover, that nature's laws have not been violated in the production of them; but, on the contrary, that they are beautiful illustrations of the extent of her resources, under circumstances favoring their development, and in perfect harmony with all her operations, however little we may know of their *modus operandi*.

Will Dr. W. pretend to say that the many instances of *third*, and even *fourth*, dentition that have been related by different writers, are all "egregious errors and misconceptions?" If he does, he is certainly either grossly in the dark or obstinately

\* In the second period of Dr. W.'s article alluded to, there is a *supernumerary* THAT, which I think it would puzzle him fully as much to account for upon sound *philological* principles.



incredulous. He might as well deny any other "freak of nature," if he choose to call it such, because, forsooth, he has not seen any thing like it in *Wetumpka*!

But perhaps he will tell us that a *permanent* tooth may sometimes be reproduced, but, that a *deciduous* one never can. And why not? What theory can be applied to the reproduction of the one which cannot be applied to the reproduction of the other? I believe it is now generally admitted that the formative process in the original production of both these classes of organs is essentially the same. They both originate from the mucous membrane. The duplication of this membrane commences in the same way in both, and passes through the same routine of changes, producing, first, the papillæ, which, in the temporary class, rise from the floor of the primitive dental groove, and, in the permanent class, from the bottom of the secondary dental groove, which had previously deepened into a "cavity of reserve." In both classes dental follicles are produced, and afterwards, by the closure of their opercula, shut sacs are formed. The papillæ then become pulps, which produce the proper membranes for the secretion of the bony structure. Now, I ask, if accidental causes may set in operation a similar succession of results in the production of a second *permanent* tooth, why not, also, in the production of a second *temporary* one?

I hope I shall not be considered *uncharitable* towards Dr. W., when I give it as my opinion, that he has not given this subject sufficient investigation. When he speaks of the pulps of the deciduous teeth giving off cords that "form the pulps of the SECOND or *permanent* set," he seems not to be very clear in his *conceptions* of "the manner in which nature carries on her operations in the production of these beautiful organs." There are no cords given off by the pulps of the teeth for this purpose. If he will examine a little further into the "anatomy and physiology of the teeth," he will find that the only "cords" which can be discovered, are those which connect with the surface of the gum. These cords had their origin in the inflections of the mucous membrane, which commenced in the secondary dental groove, about the third or fourth month of intra-uterine existence, and serve, perhaps, as *gubernacula*, or *itinera dentium*, in the process of "odontocie."

The Doctor, however, gives us the history of a case "which came under his own observation," which, in his opinion, *justifies* him in saying "that all those notions concerning *secondary deciduous* or cutting THIRD teeth, &c., originate from a misconception of nature's mode of operating." Now, I acknowledge my perceptions are too obtuse to discover the analogy between this case and the one in point; or, at any rate, to see how it is susceptible of so broad an application. I don't like to say it, but I really thought, on reading the account of this case, that (as the Doctor

beautifully expresses himself) "there must be something rotten in Denmark" here. The idea that this case is a very extraordinary one to come under the observation of one who has been *paying attention* to matters of this kind for *ten or twelve years*, is strange, to say the least of it. But that the Doctor should have left the impression on his patient's mind, that it was a *second* and not a *first* tooth that he extracted, is *passing strange!* Could he have had any doubts, himself, on this subject? He tells us that he is "compelled to say, (after mature reflection, I suppose,) instead of this being a third production, it is only a second." Then hide your diminished heads, ye propagators of so monstrous a doctrine as that of the reproduction of a tooth. The question is now settled. Dr. Thos. J. Ward, of Wetumpka, Alabama, has discovered, by his own experience, that such *notions* all "originate from a misconception of nature's mode of operating!"

Excuse the prolixity of this communication. My only object is to lead to correct observation—as this is the only true basis for the establishment of sound physiology.

Respectfully, yours,

JAMES FLEMING.

Harrisburg, Pa., May 25th, 1849.

For the Dental News Letter.

## A CASE OF SPONTANEOUS HEMORRHAGE FROM THE MUCOUS TISSUE OF THE MOUTH.

May 25th, I was requested by Dr. C. A. Harris to see a patient who was suffering from hemorrhage, and who had sent a message to him in haste.

The patient was a gentleman holding a highly respectable position in his social relations, aged about 35, of a plethoric habit, with a strumous diathesis, and an habitual dram-drinker.

The history of the case was as follows:

About two weeks previous to my visit, he found that he expectorated blood, and, on examination, found that it flowed from about the fang of a carious tooth, the right first superior bicuspid. The hemorrhage at this time did not excite alarm, but was a source of annoyance to the patient, who called on Dr. M., a respectable dentist of this city. The dentist extracted the fang of the carious tooth, and used a compress for the socket of the same, made from cork, wedged between the two teeth standing each side of the socket of the extracted tooth. This method was successful in arresting the hemorrhage, and the patient was not further troubled until about 1 o'clock in the morning of the day I saw him, when he awoke, his mouth was filled with blood, and considerable quantities having been discharged on his pillow during sleep. Feeling alarmed at this unusual state of affairs, a message was despatched by his friends for the family physician, who, after examining the case and making some brief suggestions,



he expressed a wish that Dr. Harris should be called in. Dr. Harris, at this time, found the blood flowing from the mucous tissue, about the necks of the left superior molars. A compress of cotton batting, saturated with *tinct. of nut-galls*, was applied over the parts from which the blood flowed. This controlled the hemorrhage for a few hours, when it again broke out with increased violence, and a message was dispatched to Dr. Harris.

It was about 5 o'clock, P. M., and at this stage of the case I saw the patient. His pulse was about 94, full and bounding, with an anxious and excited countenance. On examining the mouth, I found a full denture in the superior maxillary, except the right first superior bicuspid, which had been extracted at the time and for reasons above named. The anterior superior teeth were irregular, and the left superior cuspidatus stood on the labial side, and considerably without the dental arch. A number of the teeth were marked with superficial caries, and all of them were coated with a thin layer of tartar. The mucous tissue was pale, except at the margin of the gums, near the necks of the teeth, where their apices was slightly thickened and red. The hemorrhage was wholly confined to the superior portion of the buccal cavity. The labial portion of the gum, covering the socket of the left second superior molar, marked the point from which the blood oozed most rapidly, although the entire mucous surface covering the superior maxillary and palate bones was implicated in the hemorrhage.

The highly excited nervous condition of the patient, which was dependent on the use of alcoholic beverages, precluded recourse to the use of the lancet, and caused me to rely principally on local treatment. At the suggestion of Dr. Harris, I proceeded to take a wax impression of the whole of the superior jaw, preparatory to striking up a metallic plate closely adapted, and covering the entire surface of the same, which was proposed to be used as a compress. Observing that the meddlesome interference of the patient's fingers and tongue accelerated the flow of the hemorrhage, and as a preventive of their further interference, and also with a faint hope of obtaining sufficient pressure upon the parts to control the egress of the blood, I saturated cotton batting with *tinct. of nut-galls*, forcing layer after layer of the cotton between the cheek and alveolus processes. I then extended the mouth, and in like manner filled that cavity until it would hold no more, and then ordered the patient to close his mouth, and applied a bandage to retain the under jaw firmly and in a fixed position.

At 8 o'clock the same evening the patient was visited by Dr. Harris and the physician. The cotton compress was found to have controlled the hemorrhage, and after prescribing a dose of *Sul. Magnesia* and replacing the compress for the next succeeding twelve hours, a cure of the case was secured.

C. O. CONE, M. D.

For the Dental News Letter.

## AMALGAM FILLING.

MESSRS. JONES, WHITE &amp; Co.

*Gentlemen*,—I have been requested to make known, through the medium of the "Dental News Letter," some facts in relation to a tooth which I recently had extracted. The author of this request states to me, that no similar case has yet been made public, and supposing, with him, that it may be of some practical value, I will give it to you as clearly as my imperfect knowledge of your art, and the anatomy of the parts concerned, will allow me.

About four years since I applied to a dentist to extract a molar tooth in the under jaw, which contained a large cavity, and had been aching for a considerable time. He dissuaded me from it, and recommended the destruction of the nerve by the ordinary process, with arsenic, and the filling the cavity with a preparation of mercury and silver, which was then much in vogue. I consented, and it was done. After a few days the soreness of the tooth subsided, and it became as useful to me as a sound tooth, and has been so up to within the last month, excepting a trifling tenderness, after exposure to an unusual degree of cold. A short time since I was required to ride several hours on quite a chilly night, and became very cold. On the next morning the tooth in question pained me severely, and towards night became agonizing. I had it extracted, and, on examination, found in the little tuft of cellular structure on the point of each fang, a number of small globules of fluid mercury. I think on the point of one, there must have been at least a dozen embedded in different parts of the structure before mentioned. All, together, would have weighed something over a grain. Upon removing the fleshy matter from the point of one of the fangs, a minute shiny point was discovered. Suspecting this to be a fine tube communicating with the interior of the tooth, I pared down the end of the fang for perhaps twice or thrice the thickness of this paper, and still found the shiny point on the cut surface, which confirmed my suspicions. How much mercury is still in my jaw I cannot tell, nor what agency it had in producing the pain I suffered, but of this I am sure, no other tooth of mine shall be filled with the same preparation. You can use this statement as you please. If the facts are doubted, I can refer you to V. McClure, M. D., who extracted the tooth.

Respectfully,

A. B. CHAMBERS.

*Warsaw, Ky., May 30th, 1849.*

P. S.—I am told that ptyalism sometimes results from the absorption of the mercury. I have observed nothing of the kind in my case.

A. B. C.



For the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE TWO LAST MEETINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

A Stated Meeting of the Society was held February 6th, 1849.  
Dr. E. PARRY in the chair.

Minutes of previous meeting read and adopted.

Committee on Library reported progress, which was accepted.

The committee to whom was referred Messrs. Jones, White & Co.'s teeth, offered the following report:—

Your committee appointed at last meeting to examine and inquire into the merits of Jones, White & Co.'s porcelain teeth, respectfully report, that they have attended to their duties, and concur in all the points of improvement which they claim for their teeth. Observing that the American, Franklin and Maryland Institutes have awarded them medals for the same, your committee deem it unnecessary to make further comment, hoping that well-directed exertions may carry them to still greater perfection.

Your committee offer the following:

*Resolved*, That the thanks of this Society be awarded Messrs. Jones, White & Co., for their meritorious production of porcelain teeth. Mr. C. C. Williams, Dr. J. D. White and F. Reinstein, committee. The report was accepted, and, on motion, the resolution accompanying the report was adopted.

Dr. J. D. White offered the following:

*Resolved*, That a premium of twenty-five dollars, in a gold medal, be awarded for the greatest improvement in the manufacture of porcelain teeth, the samples to consist of gum, plate, molars, bicusped, and pivot teeth, twenty-five of each.

The reception of specimens to close 1st October, 1849. [At a subsequent meeting the time was changed to 1st March, 1850.] If, at the expiration of that time, none are thought worthy of such premium, they shall be returned to the manufacturer, and the premium stand open one year longer.

The resolution was adopted, and a committee of three appointed to carry it into effect.—Mr. C. C. Williams, Drs. J. D. White and E. Parry.

The above committee was instructed to have the foregoing resolution published in Dental News Letter, Dental Intelligencer and Dental Recorder.

A communication from T. W. Evans was read, when Dr. J. D. White offered the following resolution:

*Resolved*, That Thos. W. Evans and Robt. Arthur, D. D. S., having been active members of this Society, and they having left the State of Pennsylvania, we, the undersigned, offer them as worthy to become honorary members.

Signed,

J. D. WHITE, M. D.,  
C. C. WILLIAMS,  
A. R. JOHNSON.

Dr. J. D. White now presented the Society with a copy of Tomes' Lectures on Dental Physiology and Surgery, which, on motion, was accepted, and the thanks of the Society returned to Dr. White for the valuable donation.

A specimen of teeth from the manufactory of Ash & Son, London, was presented to the Society by Dr. J. D. White, and a committee appointed to examine the same.

Dr. J. D. White, Dr. S. T. Beale and Mr. S. L. Mintzer, committee. Adjourned.

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A special meeting of the Society was held April 4th, 1849. Dr. Ely Parry in the chair.

Several committees reported progress.

Dr. E. Parry presented the Society with a copy of Harris' Principles and Practice of Dental Surgery, second edition; and a vote of thanks returned him.

A communication from Mr. T. W. Evans, of Paris, in reference to an amalgam discovered by him, which, on motion of Mr. C. C. Williams, was referred to a committee of five. Messrs. Reinstein, Johnson, Williams, W. R. White and S. L. Mintzer.

The resolution in reference to premium was reconsidered, and the following adopted:

*Resolved*, That a premium of twenty-five dollars, in a gold medal, be awarded by this Society for the greatest improvement in porcelain teeth, viz:—single gum, molar and bicuspid, plate and pivot teeth; twenty-five of each kind to be sent to either of the following committee. Also, resolved, that a medal of twenty dollars be awarded for the best block teeth that may be presented. The reception of specimens to close March 1st, 1850.

*Committee on Premiums*.—Mr. C. C. Williams, Dr. J. D. White, Philadelphia; Dr. Ely Parry, Lancaster, Pa.

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### EVANS' COMPOUND FOR FILLING TEETH.

*Sir*,—I shall be obliged if you will allow me, through the medium of your journal, to make known to my professional brethren, the composition of an amalgam invented by myself some years ago, which I have used with much success for a length of time, in some peculiar cases, and have experimented with it extensively in filling carious teeth. It is composed of chemically pure tin, prepared with much care, to insure its being free from any other metallic substance, and combined with prepared cadmium, in small quantities, and mercury. In using it, more or less mercury should be employed, as may be required to make it more or less plastic.

“The cavity of the tooth being previously thoroughly freed from carious matter, can be carefully filled with the paste thus formed. In the course of a few minutes it hardens into a solid, and gradually acquires a still firmer consistency and toughness,



exhibiting a whitish color, or, if cut or burnished, a metallic lustre, like that of pure tin.

“The advantages of this filling, I believe, are such as are possessed by no other amalgam. It retains its color perfectly, neither oxidizing on the external surface, nor on that applied to the cavity, and of course it does not discolor the tooth itself. It fills each crevice of the cavity, and, effectually excluding moisture, and all kinds of deleterious matters, prevents the recurrence of caries, and becomes sufficiently hard to withstand the friction of mastication. To these most important advantages may be added others—*e. g.*, it is easily and quickly prepared, without the trouble of heating it, as is the case with some of the amalgams hitherto used. It is readily applied to the cavity of the teeth, and without the disagreeable creaking sound which attends the employment of other preparations. It will not amalgamate with, or injure any gold clasps or plate bearing artificial teeth, which may be placed in contact with it; and in case of its removal being necessary, it can be cut out as easily as a good filling, as it forms a tough, almost ductile substance, and not a hard, brittle one, like the ordinary amalgams.

“I have submitted it to the inspection and trial of some of the best dentists here and in London. As far as their opportunities of investigating it have hitherto extended, I think they fully agree with me as to its advantages. It is, I believe, the best filling hitherto used, in those cases where amalgams are thought to be useful; and some of my friends are willing to award it even higher praise than this.

“Believing it, therefore, to be a useful discovery, I wish to place it in the hands of the profession, and I make this communication to you, at the same time that I publish a similar one in France, and in my native country, America, where I first used it.”—*Lancet*.

We add a few passages from a letter from Mr. Evans :

*London, April 20, 1849.*

MESSRS. JONES, WHITE & Co.

*Gentlemen*,—Since my last to you, I have received many accounts from those gentlemen to whom I have submitted my compound. They have tested it, and all agree in saying that it is *the article* that has long been desired. Time has proved it to answer more than I dared hope in the commencement. The first in the profession in London have pronounced it the very best ever invented. Finding this, I cannot feel myself justified in withholding it from the profession. I propose publishing it freely. I have never had any thing belonging to dental science that I wished to conceal, and this being an article intended to benefit humanity, I, therefore, wish every one to be the possessor of it.

I think it must supplant the many substances which are used,

most of which I cannot but feel are very deleterious ; this, *I know*, is not. There seems but one opinion as to its being the best article in the form of an amalgam.

We copy the following circular:

EVANS' AMERICAN COMPOUND FOR FILLING TEETH.

*Each Package containing 1½ oz., Five Dollars.*

A metallic paste, suitable for the purpose of filling teeth, and, at the same time, destitute of all injurious influences, has been ardently sought for in all countries, as well by Chemists as by Dentists of every grade ; many, having become weary of the search, have abandoned it as an impossibility.

The compound now presented to the profession, was invented in America some years since by Thos. W. Evans. The peculiar virtues of this compound are found to be the following :—

There is in it no ingredient that can possibly render it improper to be employed in the most delicate constitution. It is perfectly harmless, both as it respects the general health and the teeth themselves.

Almost *immediately* after introduction into the cavity it becomes hard, and as it hardens it *expands*,—thus making a more perfect union between the filling and the tooth than is possible by any other filling which is applied in a plastic state.

A cavity filled with this compound is altogether impermeable to the fluids of the mouth, and strong tests have proved its perfect insolubility.

The most delicate comparison of the weight of the filling at the time of insertion, with its weight after having been in the mouth, proves that it undergoes no change whatever in this respect.

As regards the color, this compound approximates the color of the teeth ; insomuch, indeed, that it often requires an experienced eye to detect it in the mouth.

It is found not to become dark, or to undergo the slightest change in color, but always to retain the color it assumes upon hardening—which is not the case with the pastes or cements that have been heretofore in use.

It is not only easy of application, in any given case, but if from any cause it is requisite to remove the stopping, it can be affected without difficulty, inasmuch as it becomes a tough metal, and is capable of being cut with facility.

Much time is saved in its preparation, no heat being required as in some other preparations in use ; it has not the disagreeable creaking noise which attends the employment of other amalgams.

It will not amalgamate with or injure any gold clasp or plate bearing artificial teeth which may be placed in contact with it.

Believing myself to be the inventor of this compound, I have made no secret of it, but have published its composition in America, in the medical journals of London and in Paris.



Having been urged by many distinguished members of the profession to have it manufactured under my superintendence, to secure accuracy—as much care is required in its preparation—that it may be fully tested, I have consented to do so.

THOMAS W. EVANS, *Dentist*.

15 Rue de la Paix, Paris.

MANNER OF APPLYING THE COMPOUND.—Take, in bulk, two parts of the filings to one part of the paste, rub them well together, either in the hand or upon a piece of buckskin, that they may thoroughly combine, and use as speedily as possible.

In cases where it is convenient, apply immediately, and rather in a stiff state—it is found to make the better filling. In cavities upon the grinding surface, it is very applicable in this state as well as desirable to have it as hard as possible.

If, from the situation of the cavity, it is difficult to apply a stopping immediately, it may be prevented from setting or hardening so rapidly by placing the mass, after it has been mixed, in the palm of the hand, and closing one finger upon it, by which means it can be retained in a soft or plastic state for several minutes.

From the London Lancet.

### NEW APPLICATION OF CHLOROFORM.

I have lately been successful in the application of chloroform, locally, as a preventive of pain during the operation for the removal of diseased teeth.

The plan which I adopt is, first to remove as much of the carious portion of the tooth as possible, so as to bring the chloroform into immediate contact with the nerve of the tooth itself, by applying to it lint or cotton wool, which has been previously saturated with it. This causes the most violent pain to subside, soon after which the tooth may be removed with comparatively no pain. In fact, by the description of those on whom I have operated, there is no pain but that occasioned from the unavoidable contact of the forceps with the gum.

In thus applying chloroform, the advantages over inhalation are obvious, since the quantity used is less, and the risk to the patient is reduced to a minimum, he being conscious during the whole operation. Pain is suspended, and consequently severe and difficult operations for the removal of stumps and teeth may be effected with security and comparative ease, to the permanent comfort of the sufferer.

That it might also be made use of as a curative means for the ultimate preservation of the tooth, by means of stopping, must also follow as a natural consequence; but as what I have already said is sufficient to the adoption of its use for the prevention of pain in the teeth, I will take no more room than to subscribe myself

Yours,

C. SPENCER BATE.

# THE DENTAL NEWS LETTER.

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JULY, 1849.

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## OUR THIRD VOLUME.

As this is the last number of the second volume, it is necessary for us to say something in reference to the next, and what shall we say? we can at least say what we would like it to be—our first volume was published with but twelve pages to the number, the second was doubled, or, twenty-four pages to the number, and we would be pleased to increase the size of the third to thirty-six or forty-eight pages, and would cheerfully do so, had we the assurance on the part of the profession that they would sustain it in the way of communications.

If we could manage to secure a good list of regular contributors, beside occasional communications from others, we would then have no fear for the result, but would gladly enlarge the size with a fair prospect of increased usefulness.

Now, gentlemen, what shall it be? we put the question to you. Give us the evidence on your part of a disposition to sustain an enlargement in the way of contributions, and we will cheerfully take the risk of the increased expense. Let every man then who feels an interest in the work, or, who has the welfare of the profession at heart, write us, that he will obligate himself to furnish us with one or more suitable original articles for publication during the year, and if the number be sufficient to warrant it, we shall be enabled to consummate our desires. Write at once, that we may know what to depend on.

We have thought, that the small size of the "News Letter" has deterred many from contributing to its pages. If this supposition be correct, the objection holds good no longer, as it remains with them to say whether it shall be enlarged or not.

To those who have contributed, we return our thanks and take this opportunity to request a continuance of their favors.

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We have made copious selections from Tomes' Lectures, believing them to be of more interest than any other selections we could offer our readers.

We believe this to be the most original work on Dental Physiology and Surgery that is in print, giving abundant evidence of a close application to the subject and a thorough acquaintance with it.



Dr. A. B. must excuse us for not publishing the article referred to. To do so would only prolong what would be *now* an unprofitable discussion, besides it has been published once in a dental periodical, and has therefore been read by most of the profession.

It will be perceived by an advertisement in this number, that the Homœopathic Medical College has issued its second annual announcement, and, we understand, with flattering prospects. Without committing ourselves in favor of the particular doctrines of the school, we are free to express our approval of its having been established, inasmuch as many of the intelligent public seem to desire it. And we are also gratified that the faculty is composed of physicians thoroughly versed in medical science—allœopathy as well as homœopathy—who ever have maintained the most respectable standing in the community as physicians.

We acknowledge the receipt of a copy of the *Valedictory Address to the graduating class of the Baltimore College of Dental Surgery*, by E. B. GARDETTE, M. D., of Philadelphia.

This is a plain, but well written address, and deservedly entitled to attention. As to the sentiments expressed, we give the words of a friend whose opinion we value highly: "It is just to my mind. Indeed I have not met with any thing on the subject that so fully accorded with my own views, and pleased me so much."

*Annual Tabular Sheet of the American Society of Dental Surgeons.*—This sheet, in the hands of a careful, observing and industrious dentist, could be made interesting and useful, but we fear few will take the trouble; however, the object is praiseworthy and therefore commendable.

*The American Journal and Library of Dental Science, for April.*—This number is some two months behind its date of publication.

The library department occupies the principal part of the number. We find the first part chiefly occupied with an address delivered before the alumni of the Baltimore College, by J. H. Foster, M. D., of New York, which address we can commend, with one or two exceptions, one of which is, that the Dr. should so far step aside as to make an attack upon the New York State Society; however, they are abundantly able to defend themselves, and if they feel aggrieved, are ready enough to take up the cudgels.

The Doctor's address is lengthy, but abounds with flowers, and closes with a beautiful allegory or fable, which "spoke to our heart."

*The New York Dental Recorder for July.*—This periodical still keeps up in interest, with its earlier numbers, any reader will readily perceive that its editor is a practical man.

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*The New Graeffenberg Water Cure Reporter.*—This periodical abounds of course with Hydropathy. If some persons we know, were to apply this treatment to their mouths, they would, we are convinced, be more pleasant companions, beside the great benefit they would receive from it.

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*New Jersey Medical Reporter, and Transactions of the N. J. Medical Society. Joseph Parrish, Editor.*—This work is filled with matters of interest to the physician, and needs no recommendation from us.

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*Evans' Compound for Filling Teeth.*—We have received from Paris a supply of this article. An article on the subject will be found in this number.

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“Dr. Charles Jackson, of Boston, has received from the French Government the Cross of the National Order of the Legion of Honor, in acknowledgement of his high scientific attainments, and for having made the discovery of etherization, which is so beneficial to mankind. Dr. Jackson has also received from the King of Sweden a splendid gold medal, as a testimony of the respect in which his character and scientific services are held by that monarch.”

We copy the above from a newspaper, and the following from *Tomes' work on dentistry*, an English publication. Dr. Jackson, it will be seen, is considered the discoverer of etherization, in France; while Dr. Morton has the credit of it, in England.

“We live in an age that will be long famous in the annals of medical science, for the discovery and full recognition of the principle that the powers of voluntary motion, and of sensation, may, for awhile, be suspended, without materially endangering the life and health of a healthy individual; and that this condition can be adduced at will. To Dr. Morton, a dentist of Boston, we are indebted for this discovery. He found, that by inhaling the vapor of ether, mixed with atmospheric air, this state is induced; and, when so induced, he removed defective teeth without the patient being conscious of the operation.”

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We have just received the tenth annual announcement of the Baltimore College of Dental Surgery. The advertisement will be found on another page.



We make the following liberal extracts from Torne's Lectures on Dental Physiology and Surgery, a valuable work, which should be in the hands of every dental practitioner.

#### PLUGGING OR STOPPING TEETH.

A well-stopped tooth, if the operation has not been too long postponed, is perfectly restored to its former durability and usefulness. I removed last year, from an old man, a molar tooth that had been plugged for thirty years, and had been serviceable till within the last two years, when it became loose from absorption of the socket. You will often see teeth that have been stopped ten and twenty years.

Seeing, then, that so much may be gained in preserving the teeth, by this operation, you cannot give too much attention to its practice; for, while it is among the most useful, it is the most difficult operation the dentist has to perform. The operation is divided into two parts; the preparation of the cavity for the reception of the plug, and the insertion of the plug. In the preparation of the cavity two points must be gained, otherwise the subsequent steps of the operation will be ineffective.

The first of these is, to completely remove all the softened dentine; the second, to get a firm and regular orifice, of sufficient size to enable the plug to be inserted, and at the same time not too large. If the cavity in the tooth be large and the opening small, it will be almost impossible to make the plug solid in those parts of the cavity which are overhung; and, on the other hand, if the opening be large, and the cavity small and rounded at the bottom, like a saucer, the plug will not be retained. The best form of cavity has a circular orifice, with perpendicular walls; in fact, cylindrical.

The situation of the disease must regulate our manner of proceeding. If the cavity be situated in the opposed side of a molar, the tooth must be cut away with a sculper or graver, till an excavating instrument can be used. If the sides of the front teeth are affected, a piece of vulcanized caoutchouc should be strained tight, and then introduced between the teeth; this, in endeavoring to regain its former figure, will separate the teeth sufficiently for the operator. When the masticating surface of a tooth is carious, there is no difficulty in the operation; if the extent of the disease be slight, it may be removed by a broach of proper size. Having reduced the cavity, as nearly as attainable to the conditions I have described, the chips must be washed out, and the cavity wiped dry with cotton-wool, and the plug inserted.

In making the plug, our aim must be, first, to so perfectly fill the cavity that all moisture shall be excluded; and, secondly, to so form it that it shall be sufficiently hard to resist, equally with the tooth, the wear of mastication. Unless these two conditions are fulfilled, our work will be imperfect, and ultimately fail.

Gold or tin foil are the best materials for making plugs. Whichever of these be chosen, the method of use is the same.

There are four methods of introducing foil for making a plug. In one the metal is folded into narrow strips, proportioned in width and thickness to the size of the cavity. One end of the strip is, by means of a conveniently shaped stopping instrument, pressed to the bottom of the cavity. The strip is then bent, and a fold passed to the bottom of the hole, leaving the first fold projecting above the surface. Fold after fold is introduced, till the cavity is tolerably full. A wedge-shaped instrument is then introduced, and the gold pressed towards the walls of the cavity; more gold is, by a similar process, pressed into the cavity so obtained. This process is repeated till the wedge cannot be forced into the plug. A flattened instrument is then used to compress the gold in the cavity. When we can make no further effect on the surface of the plug by compression, the surface is filed smooth and burnished. By a careful adherence to this plan, we make a plug composed of layers of metal, arranged parallel to the walls of the cavity, and therefore not liable to fall to pieces or come out. But, on the other hand, had we made the folds at a right angle to the walls, and parallel to the bottom of the cavity, layer after layer would have peeled off, till little or none of the plug remained, and the decay would have proceeded to the destruction of the tooth.

In the second method, a piece of foil of sufficient size is rolled hard, and spherical between the thumb and finger. This is gradually forced into the cavity, care being taken to get it well in round the outer walls. When the plug has been rendered as solid as possible, the superfluous portion is cut or filed off, and the surface burnished.

The third method of using metallic foil is a combination of the two preceding ones. A piece of foil that will readily go into the cavity is rolled up loosely. When in its place, a wedged-shaped instrument is passed into its centre, which has the effect of spreading the gold towards the walls of the cavity. The centre is gradually filled with folds of gold in the manner I have described. The wedge is used again and again, till it can no longer be made to enter. The gold is then compressed on the surface, and the superfluous portions removed, and the surface burnished. When the plug is finished in either of the manners I have described, the circumference should be examined by a sharp steel probe. If this can be made to enter at any part, the hole so made should be enlarged by thrusting in an instrument as large as can be introduced, and the hole filled.

In the fourth method of plugging, the foil is rolled into short lengths, proportioned to the depth of the cavity to be plugged. These, with the assistance of a fine pair of forceps, are packed into the tooth, much in the manner you would proceed to pack cigars into a tumbler. A wedged-shaped tool is from time to



time thrust between the lengths of the foil, to force them towards the walls of the cavity. When the tool can no longer be made to enter, the surface of the plug is cut level with the surface of the tooth, and burnished.

Either of the foregoing methods of plugging will answer, if well done. But, of these, I prefer introducing the metal in folds. The situation of the cavity, and also the size, will have something to do with the selection of the plan of operating. Then, again, one person will be more apt at one manner of procedure than at another. All these matters of detail must be learned in practice. I should exhaust your patience, and greatly exceed my limits, were I to attempt to describe every variety in form and situation of cavity, and every modification and plan useful in plugging.

Where the cavity of a tooth is so large that the walls are too thin to bear the pressure necessary to the insertion of a gold or tin-foil plug, the amalgam of silver or of palladium may be advantageously used. Having prepared the cavity as for the use of foil, a little mercury is triturated in a glass mortar with a small quantity of precipitated silver or palladium, till they unite and form a paste, which is well squeezed in a piece of wash leather, to force out as much as possible of the mercury. The paste is then again rubbed in the mortar, or in the palm of the hand, and then introduced into the cavity. The cavity, however, must be first well dried with lint, and care must be taken to get the amalgam in close contact with the whole circumference of the cavity. The plug so formed hardens in a few hours, after which the surface should be well burnished.

The American dentists condemn this kind of plug, as it seems to me, somewhat unjustly. It is undoubtedly far inferior to either the gold or tin-foil plug, but it can be used where they cannot, and it is surely better than none. I have seen a mere shell of a tooth, that would have broken away on the first attempt at introducing foil, rendered useful for years by an amalgam plug.

Before leaving the subject, let me warn you that unless the cavity be well prepared by the total removal of the softened dentine from the walls, and by getting a good, firm, and well-shaped orifice, free from acute angles, no plug will answer, and least of all, the amalgam. It will fall out or become loose within twelve or eighteen months, and frequently in much less time, and decay will proceed. Teeth plugged with silver amalgam usually become stained of a deep blue-black color. When the palladium amalgam is used, there is little or no staining, if the excavating be perfect. The latter amalgam is, therefore, preferable.

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#### PIVOTING TEETH.

The Americans sometimes use compressed wood instead of gold wire for the pivot. You will sometimes find it very convenient to adopt this plan in renewing a pivot, or when the hole in the stump is necessarily rather large.

Pivoting, though the neatest, is more frequently followed by mischievous results than any other operation performed by the dentist; and so common are these, that many surgeons consider the operation unjustifiable. Some degree of pain and tenderness is almost always felt during the first few days after the operation, and unfortunately it is not uncommon to have considerable inflammation, ending in suppuration, as in the case I cited to you in Lecture XIII. But the consequences may be even worse than in that case.

The following statement was placed in my hands by a medical man who had some knowledge of the case which is related. — — —, Esq., aged 25 years, tall and thin, but apparently in very good health. On his marriage trip he visited Paris, and there had the misfortune to break off a front tooth. Wishing to conceal the accident from his wife, he went immediately to a dentist. The tooth was pivoted (and I have no doubt carefully, for the dentist was one with a great and just reputation), and the necessary concealment seemed insured. From the time of the operation, however, he had severe pain in the stump, which pain increased for four or five days, when he left Paris for Rouen. Upon arriving there the pain had become excessively severe; he consulted a medical man, but it was too late. Trismus came on within twenty-four hours, and was soon followed by tetanus and death.

#### HÆMORRHAGE FROM THE DENTAL PERIOSTEUM.

It occasionally happens, after the extraction of a tooth, that blood continues to flow from the wound till the life of the patient becomes endangered; and there are many cases on record where life has been lost from this cause.

Usually the bleeding ceases within a few minutes after the removal of the tooth, and the alveolus becomes plugged with coagulum. In hæmorrhage the coagulum forms, but blood oozes by the side. The cause of this state arises from a peculiar condition of the whole vascular system, which is termed the hæmorrhagic diathesis, or perhaps sometimes from the conditions of the vessels of the part only. The patients themselves generally tell you that they are subject to bleeding from the nose, and that they have often the greatest difficulty in checking the flow of blood.

I have met with three cases of hæmorrhage from the alveolus within the last five years, and these have occurred recently.

The first was in a lad of eighteen. I removed for him a second bicuspid of the upper jaw; two days afterwards he returned with a pale and wretched countenance, and said that the gum had bled at short intervals ever since the tooth was drawn. The alveolus was cleared of coagulum, and a piece of lint, tightly rolled into the shape and size of the root of the tooth, was loaded with a leaf of the matico reduced to powder, and then introduced into the



alveolus. The bleeding ceased within a few minutes, and did not again return.

The second case occurred in a female—a robust cook. A molar of the lower jaw was extracted; 36 hours afterwards she returned, and was evidently suffering from loss of blood. The gum, she stated, had bled ever since the tooth was drawn. A leaf of matico was softened and rolled up, with the under side outwards, and introduced into the bleeding socket, the coagulum having been previously cleared away. The hæmorrhage stopped within a few minutes. Three days afterwards the young woman's mistress wrote to say that the gum had not since bled, but that her servant still felt very weak.

The third case occurred in a young man of five-and-twenty. He returned after the hæmorrhage had lasted only six hours. Similar treatment was adopted, and with the same favorable result.

Previous to the introduction of *piper angustifolia matico* by Dr. Jeffery, the common practice was to roll up a piece of lint, and, after saturating it with a strong styptic, such as the muriated tincture of iron, or a solution of nitrate of silver, to introduce it into the bleeding alveolus, there to be retained by a compress of lint pressed on the part by the closure of the jaws. The mouth is kept shut by a bandage passed under the chin and over the crown of the head. A narrow strip of lint, saturated with a styptic, and gradually introduced into the bleeding alveolus, is, in some cases, a more convenient manner of application than the rolled plug.

Dr. Reed, of Edinburgh, has invented an instrument, of which he has published an account, for producing pressure on the bleeding part in maxillary hæmorrhage.

Should the ordinary methods of treatment fail, the dentist may succeed in arresting the bleeding by making a plate of metal, or other unyielding material, to fit accurately the surface around the bleeding part, and then confining it either by compress or by ligature to the adjoining tooth or teeth. This will prevent the blood from escaping out of the alveolus. Such an apparatus must be specially constructed for each case, and might be made in one or in two hours at most. In great need, a piece of sealing-wax, moulded to the form when warm, might prove of great value.

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#### ESCHAROTICS.

Escharotics may be used in a diluted form, so as to destroy the surface only, or they may be applied in a more concentrated state, to kill the whole body of the pulp.

Most of you know that an ulcerating or a suppurating surface sometimes becomes extremely sensitive and painful, and that immediate relief is obtained by brushing over the surface of the sore with a weak solution of nitrate of silver. A similar condition, I apprehend, now and then obtains with the exposed surface of the dental pulp, for we occasionally find that a solution of nitrate of

silver, gr. iij. or gr. iv. to the  $\text{ʒj.}$  of distilled water, will allay toothache after the failure of what at first seemed more promising treatment.

If, in spite of palliative treatment, the pain in the tooth still continues, and we have reason to believe that the disease has not extended from the pulp to the dental periosteum, escharotics sufficiently powerful to destroy the body of the pulp may be used, and thus cut short the pain, by the destruction of the pained organ, without necessitating the loss of the tooth. Either of the mineral acids, potassa fusa, nitrate of silver, chloride of zinc, or arsenic, will answer our purpose wherever there is sufficient exposure of the pulp to allow of their efficient application. I have used each with success, and with failure.

If the caustic employed be fluid, a small quantity may be placed in contact with the pulp on a bit of cotton, and retained by a plug of wax. If a solid be used, it will be sufficient to place a small particle in the cavity, and stop it in by a temporary plug. The pain, on the first contact of the caustic, is mostly increased, or, at all events, not diminished; but, if the destructive agent can be and is well applied, the pain ceases within from a quarter to half an hour.

The escharotic will act quickly or slowly, in proportion to the amount of surface to which it is applied. If the painful dental pulp be exposed only over a very small part of its surface, the escharotic will take some time in destroying the whole organ, but, if the surface exposed to the destructive agent be large, then the effect will be produced quickly. It is therefore desirable, before applying remedies of this class, to remove from the tooth all the softened dentine, and thus leave the pulp exposed to the action of the caustic.

Seven years since I used rather extensively the chloride of zinc\* for destroying diseased dental pulps, and, from the experience I then gained, I am led to consider it to be as good as any, if not the best, escharotic for that purpose. It may be applied alone, or diluted with plaster of Paris, or combined with morphia, and placed upon the end of a temporary plug. The morphia is supposed to diminish the pain induced by the zinc.

The American dentists have for some time past been using arsenic to effect the same end, and, as they report, with great success. The arsenic is to be placed in contact with the pulp, and to be retained by a temporary plug. In the course of half an hour the pulp is destroyed, and is to be drawn out, and the cavity is to be immediately plugged with gold. In my hands the arsenic has oftentimes failed to produce the desired effect; and, had it been ever so successful, I should still have avoided its frequent use, because a very minute quantity, accidentally swallowed, may produce serious gastric disease.

I think arsenic should be struck off our list of dental remedies,

\* DRUITT'S *Surgeon's Vade-mecum*. Second Edition Published 1841.



seeing that we have other escharotics that are just as effective in destroying the pulp, and which, if swallowed in the minute quantities we use, can work no evil.

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#### HEREDITARY CHARACTER OF THE TEETH.

It is a well-attested fact, that the properties of the parent are to a considerable extent transmitted to the offspring. In no part of the body is this hereditary character more frequently displayed than in the teeth, and especially as regards the external form. If the teeth of the parents be strong, and well formed, we may expect to find similar teeth in the child—unless, indeed, the child be unhealthy. Peculiarities in color, and in position, are often transmitted. The predisposition to early decay often passes from the parent to the child. It does not, however, follow that the hereditary peculiarity in dental formation will in all cases appear; on the contrary, we sometimes see cases in which the reverse has manifestly occurred. Again, a peculiarity may not reappear in the first or even the second generation, but show itself in the third remove from the original parent. These facts are worth bearing in mind, as they often influence the treatment of the abnormal conditions of the teeth. Not that the fact of a malady having occurred in the parent of a patient will of itself indicate a peculiar treatment; but you will probably learn how a remedy was, or was not, effected by the treatment adopted in this previous instance. Such knowledge you will find especially useful when similar cases have occurred in the children of one family.

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#### STAINED TEETH.

It has been observed, in persons who have died from suffocation, that the teeth are in some cases stained red. This state, before the structure of the teeth was understood, was considered to be a proof of their vascularity. It was supposed that the blood imparting the color was contained in vessels which, in these cases, were gorged by the mode of death. This, I need not tell you, is an incorrect hypothesis: vessels, when they do exist in the substance of the tooth, are never present in such number as to give a red color to the dental tissues. We shall find the more correct explanation by considering the state of the blood in asphyxia. The coloring matter of normal blood resides entirely in the globules. The liquor sanguinis is perfectly colorless. But under certain circumstances the colored globules decompose, or are dissolved in the liquor sanguinis, which then becomes a deep red. The tubuli of the teeth, though too small to admit the red globules of the blood, freely admit the liquor sanguinis; and if this be colored red, the tooth itself will necessarily take the same hue.

In persons suffering from jaundice, the teeth become tinged. In some few instances they take a deep yellow, almost equalling in intensity the color of the skin, but, in the majority of cases, they assume only a faint tinge of yellow.

## AN INSTANCE OF DISEASE OF THE ANTRUM, PRODUCED BY A FALL.

BY J. L. LEVISON, ESQ., SURGEON DENTIST.

Some time since, a young woman of this place, about twenty-two years old, applied for my advice, she having a large swelling on the right cheek, the size of a turkey's egg, the lower or broadest part of the tumor being in a line with the upper lip; the swelling extending so high as to effect the eye and the eyelid. The former was protruded, and the latter almost paralyzed, so that besides the deformity, the sight of the right eye was seriously affected, and the secretion of tears a source of irritation to the cheek. The tumor was very hard; the surface of the skin red, inflamed, shining, and very painful to the touch. Considering that disease was connected with the pituitary membrane which lines the antrum, I carefully examined the mouth, and observed that the second molar tooth on the affected side was carious, and the gum dark and livid, and so soft, that it appeared to have been deprived of all vitality; and at the same time the foetor was very offensive. In fact, the gum presented a similar appearance as when there is an effort to throw off a piece of dead bone. In the present case there was a well defined line of demarcation between the affected portion (the cause of the local irritation) and the healthy jaw, for the shape of the diseased gum corresponded to a piece of bone I could move with the slightest pressure. There had not been any teeth extracted on the diseased side of the face, and it occurred to me that the affection of the antrum had been induced by a blow on the face, or from a fall. That, in either case, a large portion of the alveolar process had been fractured, and the molar tooth injured at the same time, by having its periosteum denuded, or so injured that the inflammatory action was set up, and the tooth ultimately destroyed. Having questioned my patient, her answers proved the correctness of my diagnosis. She told me that about ten years since she had fallen down stairs on her face, but that she was not aware that she injured herself at the time, having been stunned. She distinctly recollected that soon after the accident, the swelling on her face commenced with some uneasiness in her mouth; that at first the tumor was very small, and when it had attained the size of a pigeon's egg, she had applied for advice, and was given something to rub it externally, but without any advantage; and that it had since gone on increasing; that she did not then heed it much, although it was always more or less painful, but that she never suffered any alarm until there seemed every probability she should lose her sight. I mention these particulars, because few persons of her class give any history of their cases. It can only be obtained by a species of cross-examination. I removed the carious molar tooth, with the portion of the dead alveolar process, when a considerable quantity of thick, curdy mat-



ter came away, some portions being in different sized lumps. A direct communication was kept up between the antrum and the mouth by means of a conical-shaped tube, and the discharge continued, night and day, for some time. For three weeks I injected the antrum, every alternate day, with a lotion of about twenty drops of the chloride of zinc to an ounce of distilled water. About the end of a month the deformity had entirely disappeared, and the affected side had acquired its normal proportions; the eye had recovered its natural position and brightness, and the mouth itself had become perfectly healthy. This case forms additional evidence to the opinions I have advanced in previous papers, that it is impossible for a surgeon-dentist to do his duty, if he have not a knowledge of general anatomy and pathology, and also a special information of the mouth, its diseases and treatment.—*London Lancet*.

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### HULL'S IMPROVEMENT TO THE BLOW-PIPE.

Dr. Hull, of Mattewan, has sent us a fixture which consists of a small cylindric barrel about half an inch in diameter and a little more in length. From the centre of one end projects a small tube, into which the common mouth blow-pipe is to be inserted, and from the circumference of the cylinder issues another pipe in all respects like the bent extremity of the common blow-pipe. This little cylinder or barrel is intended to collect the moisture which so often passes through the blow-pipe and sputters upon the work while soldering.—*N. Y. Dental Recorder*.

This style of blow-pipes we have sold for years.—*News Letter*.

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### CASES IN WHICH ETHER WAS EMPLOYED.

At Dr. Morton's office in Boston, during three weeks ending June 8th, 1849, the Letheon was administered to thirty-nine patients, for whom one hundred and twenty-nine teeth were extracted, five nerves destroyed, and one tooth excavated. The quantity of ether used was forty-three ounces. The time of insensibility varied from half a minute to five minutes, and the time of recovery from one to two minutes.

The Ether (letheon) was given to persons of various ages from ten to fifty-one years, and to those of almost every variety of temperament, causing the pulse to vary, between the commencement of the inhalation and the end, in some cases, as much as thirty-five beats; and yet there is no case reported in which any unpleasant or dangerous symptoms were manifested beyond restlessness, and, in one or two cases, slight spasms.

The above is communicated to the Boston Medical and Surgical Journal, and would seem to indicate that the letheon is still used to considerable extent in Boston, for extraction of teeth; while in this city, and in most other places, so far as we have been able to learn, it has been generally abandoned.

From this report we are led to infer that Dr. Morton's practice has not suffered so much, by his connection with letheon, as is represented in his memorial to congress, or if so, is rapidly returning again. The Dr. is undoubtedly entitled to credit for his perseverance in successfully carrying into practice the discovery of Dr. Wells, and we sincerely hope that he may live to reap his just reward.—*N. Y. Dental Recorder*.

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### STEAM INTO THE PRACTICE OF DENTISTRY.

A friend called in our office a few days since, and gave us the following:—On his way up the river, business took him across the river from Louisville, where he met an itinerating steam dentist. He was prepared with a small furnace and boiler. To the latter a flexible pipe was attached, which when a patient presented himself with an aching tooth, or wished a nerve removed, was introduced into the cavity of the tooth: some *roots* or *herbs*, in flavor like garlic, were put into the boiler with water or some fluid. The furnace was then heated up—puff, puff, goes the steam, and with a hiss out jumps the nerve—all done without pain—rights sold for the use of the invention on moderate terms, &c. &c. Our informant happened to have an aching tooth, which he put under treatment; but unfortunately, for the steam doctor, the nerve had long since departed, and the garlic vapor could not restore it nor relieve the pain. Somewhat mortified, and feeling rather foolish, he *sloped*.—*Dental Register of the West*.

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*Amsterdam, May 3, 1849.*

MR. EDITOR.—I take this opportunity through your *Recorder*, to caution others against the too careless manner of burning alcohol for soldering and other purposes. Although I was aware of the danger incurred by not having the wick large enough to completely fill the tube of the lamp, yet, in using it several years, I had become less cautious, and the wick not occupying the whole of the orifice, the fire communicated with the inside of the lamp, and caused an explosion, forcibly expelling the cork from the top of the lamp, and forcing the wick out of the tube, together with about half a pint of alcohol on the floor, some three or four feet from the bench on which it stood. The tube being directed a little from me, I escaped by having a small quantity of the burning alcohol thrown in my face, and burning me in some half dozen places rather severely, together with my hair and eyebrows, which were pretty well singed. Had the tube pointed directly towards me, so that I had received the contents of the lamp in my face, I should have been severely injured, and should have considered myself fortunate in escaping without the loss of either of my eyes.

The danger lies in not having the wick large enough to fill the tube.—*Dental Recorder*.  
J. C. D.



# BALTIMORE COLLEGE OF DENTAL SURGERY.

SESSION 1849-50.

The Mechanical and Dissecting rooms of this Institution will be opened for teaching the principles of Operative and Mechanical Dentistry and Practical Anatomy, on the last Monday of October. The regular course of Lectures commences this session, on the last Monday of November, and continues four months.

## FACULTY.

ELEAZAR PARMLY, M. D., Provost.

CHAPIN A. HARRIS, A. M., M. D., Professor of Principles and Practice of Dental Surgery.

THOS. E. BOND, JR., A. M., M. D., Professor of Special Pathology and Therapeutics.

W. R. HANDY, M. D., Professor of Anatomy and Physiology.

CYRENIUS O. CONE, M. D., D. D. S., Professor of Operative and Mechanical Dentistry.

PHILIP H. AUSTEN, A. M., M. D., Lecturer on Dental Chemistry, and Demonstrator of Mechanical Dentistry.

The Faculty announce their tenth annual session with increased confidence and pleasure, both from the prosperity and success attending the past, as well as from the cheering prospects of the present and future. It will be perceived that the Chairs are now all filled, and the Faculty are therefore prepared to offer to the students of the coming course of Lectures, an increased amount of *practical instruction*. *Practical instruction* forms the great and prominent feature of the College, and to this fact we wish most especially to call the attention of the *Dental Profession, Students of Dentistry, Physicians and the community at large*. For this purpose the most ample provision is made—first, in having large and commodious rooms to work in, with all the necessary appliances; and, secondly, in having either the Professor or Demonstrator of Mechanical Dentistry always at hand to show how the work should be done. But this is not all. The College also contains an *Infirmery*, which constitutes, perhaps, its most attractive practical feature; for here it is that patients assemble from day to day, throughout the course, to have the various operations upon the teeth performed—and these operations are required to be performed by all the students, which is readily done by dividing the whole class into smaller classes, and allowing each to practice in rotation—and this kind of systematic, practical discipline is kept up daily through the whole session, under the immediate supervision of the professors of the Operative Department and the Theory and Practice of Dentistry. Another practical feature is the Dissecting room, which is superintended by the Professor of Anatomy, and where the student is earnestly advised to resort, that he may obtain that practical acquaintance with all the organs of the body, as well as those most immediately in connection with the profession of his choice.

The *Museum* contains thousands of teeth of every pathological variety, with several beautiful Anatomical preparations, imported from Paris, together with others recently ordered, all of which furnish the most abundant means for demonstrations.

Tickets for the course, \$110; Dissecting Ticket, (optional,) \$10; Matriculation, \$5; Diploma Fee, \$30.

W. R. HANDY, *Dean*.

## HOMŒOPATHIC MEDICAL COLLEGE OF PENNSYLVANIA.

The course of Lectures in this College will commence at the College building, in Philadelphia, on the first Monday in October, 1849, and will continue until the 1st of March following.

### FACULTY OF MEDICINE.

CALEB MATTHEWS, M. D., Prof. of Mat. Med. and Therapeutics.

WM. S. HELMUTH, M. D., Prof. of Hom. Institutes and Practice of Medicine.

SAMUEL FREEDLEY, M. D., Prof. of Botany and Med. Jurisprudence.

CHARLES NEIDHARD, M. D., Prof. of Clinical Medicine.

WALTER WILLIAMSON, M. D., Prof. of Obstetrics and the Diseases of Women and Children.

ALVAN EDMOND SMALL, M. D., Prof. of Physiology and Pathology.

MATTHEW SEMPLÉ, M. D., Prof. of Chemistry and Toxicology.

FRANCIS SIMS, M. D., Prof. of Surgery.

WM. A. GARDINER, M. D., Prof. of Anatomy.

# THE DENTAL NEWS LETTER.

Vol. III.

OCTOBER, 1849.

No. 1.

For the Dental News Letter.

## TREATMENT OF DENTAL PULP PREPARATORY TO PLUGGING. BY DR. J. D. WHITE, Dentist.

MR. EDITOR,—There is no subject connected with the duties of the dental practitioner so important as the above, and none which the writer would approach with more deference to the opinions of others. That the subject is intricate all will agree, and that nothing has been settled upon, to direct the young practitioner in a way by which he may generally arrive at very satisfactory results, is also true. It is justly remarked by Mr. Tomes, of London, “that it is too much the practice, at the present day, to immediately remove an aching tooth. It would well repay any one who has time and opportunity, to devote their energies to the investigation of this subject,” and that “there are many teeth extracted which, with care, might be saved and rendered serviceable for years.” The same remarks will apply, to a great extent, with reference to the subject in this country. Professor Harris, of Baltimore, remarks, in his work on dental surgery, published some time ago, that “Indeed, I regard the propriety of plugging a bicuspid or molar, after the nerve has been exposed, as so extremely doubtful, that I think I hazard nothing in asserting, that however correct the preparatory treatment may have been, it will not be successful in more than about one case out of four.” And more recently he remarks, in an article on the treatment of the pulp, in the American Journal and Library of Dental Science, July 1st, 1849, that “even now, although he has performed the operation successfully in numerous instances, he feels considerable hesitancy with regard to the propriety of expressing his views upon the subject, nor would he at this time, had he not been frequently requested to do so.” This eminent author further remarks, “although he is disposed to think favorably of it at present, its ultimate value, to some extent, remains to be determined;” but “Hereafter, he may furnish the readers of the Journal with the result of his observations and experience upon the subject.” This is the right spirit. Combined observation is the only sure way by which we can hope to arrive at correct conclusions in any difficult subject. If such had been the practice of those illustrious names who have gone from among us, and a correct record handed down to the rising generation of the profession, incalculable good might have been done for some of the ills that flesh is heir to, and an important work have been



done, and fixed upon established principles, which, as yet, has scarcely been commenced. With regard to the propriety of attempting to treat the dental pulp, as a general rule, when exposed by decay, there can be no doubt. Subject, however, to many considerations, the age of the patient, as to whether the roots of the teeth are fully formed, as well as the general health and tone of the teeth, gums, and the system generally. But experience can only be rendered advantageous, in this respect, by close observation, founded upon an extensive knowledge of physiological and pathological science. However uncertain the treatment may be, it is better to make the trial, for even if the tooth is lost, it is no more than would happen at any rate, as the tooth is useless with an exposed pulp, and better learn by losing hundreds, than to abandon for ever the attempt to preserve any. The writer has been making extensive experiments in the treatment of the exposed pulp, for twelve years, in every conceivable way, and has finally settled upon a general and very successful plan of practice, and which plan he gave in full in a thesis paper on the treatment of the dental pulp preparatory to plugging, for the degree of Doctor of Medicine in the Jefferson Medical College, in 1844, and which will form the basis of the present series of papers upon the above subject.

To better understand the subject, a few remarks, with reference to the division of toothache into different stages, and the diagnosis only, will not be out of place, as it is presumed that students become, at the present day, acquainted with the minute anatomy, structure, and physiology of the teeth, in the earliest part of their studies; those that have not, I would refer to *Tomes, Harris, Jourdain, and others*. There is no case of toothache that cannot be cured, and the tooth saved, as a general rule, if there be enough of the dentine or body and root of the tooth remaining to receive a plug. Toothache may be divided into, and treated under three heads, viz: *True, False, and Sympathetic*, but may also be considered as only different stages of the same disease; because it is evident, that however remote or obscure the pain and pathological change may be, if excited by a tooth, it is none the less toothache in some of its forms or stages.

1st. *True toothache* is acute inflammation of the dental pulp or nerve of the tooth only, and subject to the same changes as any other vascular tissue of the body, while running through the different stages of inflammatory action, and the intensity and character of the pain depending somewhat upon, and marking the different pathological changes the pulp is undergoing at the time. *Its causes*,—may be *constitutional, remote, approximate or local*. Constitutional, such as high sensibility and irritability of the nervous and vascular system. Remote, when other diseases are operating upon the system; such as tuberculous diseases of the nervous system, genital organs, attacks of cold, &c.; in short, any disease which operates to promote irritability and a morbid

condition of the system, will favor an attack of toothache of any kind. Approximate and local: such as one diseased tooth operating upon another, by *metastosis*, sympathy or close proximity; decay of the dentine sufficiently to expose the pulp to air, and the irritating acids of the mouth, sudden and extreme changes of temperature, erosion, &c.; dead dentine without much softening, acting as a foreign substance, as in cases of blackness of the tooth, substance commonly called black decay; on the contact of any foreign substance or plugging material, while introducing a plug; accumulation of serum, blood or pus beneath a metallic plug, or the decay of the tooth itself; when inflammation attacks the pulp before the decay is removed sufficiently to allow of the escape of the accumulating fluids.

2d. *False toothache* is an inflammation of the alveolar dental membrane and gums, and is commonly communicated from *within* the tooth to *without*, by continued inflammation and ulceration of the pulp through the foramin, at the end of the root; hence it almost invariably commences at the apex of the fang. This membrane never continues acutely inflamed for any length of time, without destroying the vitality of the pulp, because the swelling of the coats of the blood vessels around the foramin, at the end of the root, cuts off a supply of blood to it, and the high grade of inflammation which exists in the pulp before it extends to any height externally, will cause it to slough. This is the point at which true alveolar abscess commences, and is never established without a loss of the dental pulp. *It causes salivary calculi*, (but, as observed above, generally disease of the pulp,) which will often excite extensive inflammation of the gum and periosteal membranes, and sometimes to such an extent as to even inflame the pulp and cause it to slough; a blow with any hard substance will often produce the same effect. Calomel is also a common cause of periosteal inflammation, especially when pushed to ptyalism, and acids of various kinds, administered during illness, and the mouth not washed carefully. But the most marked cases of the kind, and the most painful, but without the extreme sponginess which exists in severe ptyalism, that we have ever seen, has been during the development and eruption of the wisdom teeth, in patients of extreme irritability of the nervous and vascular system. And what is most curious, however large, and however sensitive the teeth may become in ptyalism or teething, as soon as the irritating cause is removed the teeth return again to their natural and healthy condition, as a general rule, without a loss of the pulp.

3d. *Sympathetic toothache*.—This character of toothache may be regarded as only existing in sound teeth, or in teeth in which pain is experienced, but are not themselves the exciting cause of the pain, but excited by some irritating cause along the course of the nerves of the same side of the face; not, as is supposed



by some, caused by a diseased tooth of the same class on the opposite side. Opposite jaws may be painful from the same cause, but not opposite sides of the face, except it be from disease of the roots, or both of the nerves of the fifth pair—such as in rheumatism or irritability of the nerves of the head and face generally.

*Its causes.*—Diseased neighboring teeth; diseases of any character involving the fifth pair of nerves; general irritation of the gums from *salivary calculi*; partially necrosed roots; uterine pregnancy; development and eruption of the teeth; exostosis of the roots and alveolar processes; ossification of pulp, &c. &c.

*Diagnosis of true toothache.*—Actual contact with your instrument, after removing the decay of the tooth, and ocular demonstration, is almost the only positive signs of toothache; still the following symptoms may sometimes lead to correct conclusions, viz: pain upon taking substances into the mouth above or below the common temperature of the blood. Yet, high sensibility of the tooth, when only slightly decayed, or where they are wholly sound, may give rise to great pain upon taking cold or sweet substances into the mouth, and sometimes cold is the only temporary remedy for inflamed pulp; therefore, a toothache which is relieved by cold water, may be relied upon as arising from inflammation of an exposed pulp; on the contrary, warm, when it produces any impression at all, it is to increase the pain, and that is frequently the first sign we have of the inflamed pulp, after a tooth has been plugged with slight exposure of the nerve. Tenderness to the tooth *inside* of the *cavity of decay*, and more or less prolonged pain after the instrument is removed; while pain excited by sensibility of the bone, only lasts while the instrument is in actual contact with it. Again, a little experience will render the operator capable of judging whether the pain, excited by the contact of his instrument, is really from an exposed pulp or sensitive bone, by the peculiar thrill which it gives the patient.

These symptoms all become much exalted when acute inflammation attacks the pulp, together with intense pain accompanying. Intermitting pain is also a marked sign of true toothache, especially in the after part of the day, and forepart of the night,—the febrile exacerbation—the determination of blood to the head and face, which gives the flushed cheek more or less to all in the evening, accounts for more pain being experienced at this time than any other in the twenty-four hours. Few have toothache in the morning; hence, the promises which are made in the night, that the tooth shall be extracted in the morning, are, on account of the absence of pain at that time, so frequently broken by the sufferer. When these symptoms are present, and there is no seeming elongation of the tooth from the socket, and no undue sensation by sharply striking against the cutting edge or grinding surface of the tooth, with a hard instrument, it may be generally relied on as diagnostic of true toothache.

For the Dental News Letter.

MESSRS. JONES, WHITE &amp; Co.

In your "Letter" of July last, I noticed a reply made by Dr. Fleming, of Harrisburg, Pa., to my communication, which appeared in the April number, preceding, in relation to the existence or production of SECONDARY DECIDUOUS teeth, &c. In this affair the Dr. seems to assume rather a peculiar attitude. He first propounds to the public a kind of *tooth enigma*, viz: "can a deciduous tooth be reproduced by the restorative powers of nature, when its fang and pulp have been entirely removed?" This question he asks, as though he did not know at the time what to think of it. After receiving an answer, that he does not seem to relish, he sets about and answers himself in the affirmative, and says it can be supported by "sound physiological principles." Now, if Dr. Fleming, be in the possession of so much physiological knowledge relative to this matter, why is it that he never troubled the public about it. The simple declaration of an opinion, unattended by any evidence upon which to predicate that opinion, surely can do but little towards settling a controverted point. Indeed, I think there are some considerable barriers to be removed before the Dr. establishes his secondary deciduous production upon such principles. My object, in my first communication, in speaking of the disposition made of the original germs of the teeth, in the formation of the first and second sets, was merely to indicate the inutility of looking to this source for the rudiment of such a production as the one in question.

To the brief manner in which I expressed the existing relationship between the rudiments of the first and second sets of teeth, the Dr. has objected. And it is true, that the permanent sac is formed by a folding, or an inflection of the same mucous membrane that forms the temporary one; yet there is an intimate connexion and relation existing between the two rudiments from their earliest formation, up to the separation of the gubernacular cord, in due time by natural process; and whether the permanent pulp derives any support from the temporary pulp or tooth by this connexion, there is one thing generally agreed upon, that the health, growth and proper development of the permanent teeth depend upon the preservation of this connecting cord, until the proper period arrives for its separation. None of the ten anterior permanent teeth are produced without a corresponding temporary one. If a production of the kind, first instanced by Dr. F., ever had an existence, it must have been formed by a process differing materially from that forming both the temporary teeth proper, and the permanent ones. In both the latter instances, there is an even, unbroken, uninterrupted folding of the mucous membrane forming the sacs of both classes. And how is this condition obtained of the mucous membrane in an alveolus from which a tooth has been extracted or knocked out. In this event the



membrane encircling the socket must be lacerated and injured, requiring several days to regain its health and union. And after this is accomplished, that it should possess such wonderful restorative powers, as to form a new secondary sac, is among the greatest improbabilities; but admitting the sac, pulp and tooth formed, we might ask again, how is it to be articulated? If placed in the same alveolus occupied by the former tooth, how were the gums and processes preserved from absorption, which is the unfailing result from extraction? If this absorption did occur, and the new production articulated in its own socket, how was this socket obtained; and the internal vascularity of the tooth secured by its connexion with the vascular system? In fact, all the circumstances connected with a production of the kind in question, tend to constitute it a phenomenon of no small magnitude in the renovating powers of nature. Not occurring within the ordinary process of physical laws, nor to be accounted for "upon sound physiological principles." Dr. Fleming thinks differently, and I am sure he is welcome to try his hand; but, in doing so, I fear the Dr. will imitate the new minister who made his first appearance in the pulpit, rising and drying the perspiration off his face two or three times, and not finding a word to commence with, resumed his seat, merely saying, "ladies and gentlemen, if any of you think it an easy matter to preach, you may get up and try."

Diminutive as the second period of my first article was, Dr. F. appears not to have understood, or if he did, has misrepresented it. He says, it is "passing strange" that I should have left the impression upon my patient's mind, that the tooth I extracted was the SECOND, and not the FIRST. I cannot conceive from what source the Dr. procured such information, for I plainly stated, that before extracting the tooth, I gave it as my opinion, that it was a TEMPORARY one, having never been shed.

After a period of two years, (in order to be brief,) another tooth made its appearance and filled the vacancy; that this latter production was believed in the neighborhood to be a THIRD; having had the SECOND extracted for irregularity. This latter clause was rumor also, and not an expression of my opinion; this was shown previously to be different. As the tooth extracted was believed by myself to be DECIDUOUS, as a matter of course, I was compelled to say, the latter production was only the SECOND permanent cuspidatus. I mentioned this case in my first article, because of its being somewhat remarkable in cutting a tooth of the second dentition at the age of seventeen, but more particularly to indicate the prevalence of erroneous impressions; this being only one among the multitude of cases. In fact, so frequently do we find impressions of this kind existing, that it is almost of daily observation. Then, reasoning from analogy, may there not also exist some misconception as to the reproduction of the deciduous tooth first related by Dr. Fleming, so that there may yet exist a

little more analogy between the two cases than he at first supposed.

There is one fact I feel fully assured of, that it is much easier to account for the manner in which errors exist, in relation to productions of the kind, than their formation "upon sound physiological principles." That there are many cases of a THIRD dentition in advanced life, no one denies, and that these cases are "FREAKS of nature" no one will dispute, not occurring within the ordinary process of physical laws.

The remark the Dr. was pleased to make, in relation to "diminutive heads," bears an indication of his being a little nettled; as no remark of mine was intended to sully his feelings, I hope he may throw off a little steam, reduce his pulse to seventy-eight, and endeavor to feel better.

Respectfully yours,

THOS. J. WARD.

Wetumpka, Ala. Sept. 4th, 1849.

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For the Dental News Letter.

## REMARKS UPON THE REMARKS OF DR. J. B. MITCHELL, ON THE DESTRUCTION OF THE NERVES OF TEETH, AND THEIR TREATMENT.

Members of the profession must know the evil effects of extraneous or lifeless bodies remaining in living parts. To examine the progress of salivary calculi or tartar, which deposit is so gradual, that it takes years before it accumulates to any extent; we plainly see from its first accumulation, the commencement of inflammation of the gum around the necks of the teeth where it has deposited itself; and in this process of nature, we see the edges of the gum around the necks of the teeth highly inflamed, bordering on suppuration, and disengaging itself from the necks of the teeth, until the alveolar processes are exposed; when they absorb, leaving the teeth with no support, and the consequent loss of the teeth. Thus, we see that a lifeless substance produces the most injurious consequences, if allowed to remain in living parts. Now, in calling our attention to the practice of destroying the dental pulp, Dr. J. B. Mitchell asserts, that destroying the nerves of teeth deprives them of their whole vitality, according to a quotation by him from Sir Benjamin Brodie, which he says, must set this at rest. "The inflammation on which toothache depends," says that gentleman, in one of his clinical lectures, "terminates, as it always does, in the death of the pulp in the tooth; then the whole tooth dies, and is now like a portion of dead bone, or any foreign substance stuck in the jaw." (Medical Gazette, Vol. XV. page 347.) Dr. J. B. Mitchell, says, "operations, therefore, for the artificial destruction of the



pulp of a carious tooth, have no higher object in view, than the hurrying of the disease through its most painful stage, in order the sooner to induce the more advanced, and far more injurious one. They are, in fact, operations for the more speedy production of stumps; their sole aim is to remove pain at the expense of a greater evil; as such, it is evident, that they have nothing in common with the operations of general surgery, which have for their object ultimate benefit, though purchased by immediate pain, and it is but natural to suppose that they owe their origin to the urgency of the patient, rather than the suggestions of science." (Dental Recorder, Vol. III. page 60.) I suppose Dr. Mitchell and Sir Benjamin Brodie thought they had discovered, in searching for knowledge, that destroying the pulp of a tooth, kills the whole vitality of the tooth itself, and therefore certain in comparison to cause the effects I have mentioned above of salivary calculi. I would suppose Mitchell and Brodie could have spoken upon a subject more nearly connected with their profession, that would have done them some credit, instead of speaking upon a subject that they knew just enough about to make them look ridiculous in the eye of the dental profession. Every young female that wears artificial curls, knows that dead hair will not do to make them out of; every worker of ivory knows the difference between live and dead bone; and every hatter will tell you of the life of furs; and every dental surgeon will inform Dr. Mitchell and Sir Benjamin Brodie, of the life of teeth, independent of their pulp. If Dr. Mitchell, or any one wishes to satisfy themselves as to the fact of it, let them cut off an anterior incisor, no matter how much decayed, so as there is no inflammation of the pulp, at the extremity of the fang, extirpate or cauterize it to the end of the fang, dry the canal and fill it up perfectly with gold, and it will feel so much like it did before, that the patient will not be able to tell the difference. I know that artificial teeth can be worn on such roots for years, and no inconvenience arise from them. Now, if a fang was like a splinter in the jaw, the effect would be as Sir Benjamin Brodie asserts. The effect inferred to arise by Dr. Mitchell, from the destruction of the pulp, is, in some cases, the spread of inflammation, caused by the atmospheric air at the end of the fang, creating chronic disease, which considerably weakens the nervous system, and which would be entirely obviated by skilful treatment in filling, and if the inflammation does not spread, and the open canal of the tooth gets jammed up with food, causing inflammation, suppuration and its consequences, immediately leaving chronic disease behind, which also can be obviated by skilful filling. The actual truth is, that no fang can be as lifeless as tartar, while the least particle of gum is growing to it.

C. F. GOODWIN.

For the Dental News Letter.

PARIS, *September 20, 1849.*

MESSRS. JONES, WHITE &amp; Co.

GENTS,—In compliance with a promise given to my professional brethren, I should like to avail myself of the medium of your News Letter, to give my present views in regard to the preparation of tin and cadmium, an account of which I published in the London Lancet and the London Medical Gazette.

It appears to have been inferred from my remarks in these Journals, that I am an advocate of the practice of filling teeth with amalgams. This is an honor to which I have not the slightest claim whatever, and I must therefore leave it entirely to the enjoyment of those who are justly entitled to it. The fact is well known to my friends on this side of the Atlantic, as well as in America, that I have always been strongly opposed to the use of any other material for filling teeth than gold, and in my own practice I have never made use of any other. My predominant opinion has always been decidedly in favor of gold, notwithstanding I have, in common with others, experimented with a view, on my part, of testing the merits of substances designed to be used in a plastic state. From my experiments with the preparation alluded to, I discovered that it had qualities which the other amalgams did not possess. It preserves its color better than the other mercurial preparations I am acquainted with. It also has the advantage of becoming a tough ductile substance, susceptible of being cut or burnished like a piece of tin. In addition, the cadmium seems to completely absorb the mercury in the process of crystalization. From these circumstances, it was thought to possess important advantages over any of the substances hitherto employed.

There is, in my opinion, a very great objection to all the combined metals, arising from the fact that they are all promoters of galvanic action. This objection is a very serious one in a substance employed for filling teeth. Upon removing some of this filling, which appeared perfectly tight, and which was unchanged in its color upon the exterior surface, I have found that beneath the metal a deep yellow hue had made its appearance, penetrating for some distance into the bone of the tooth. This phenomenon does not present itself until after the lapse of considerable time, and appears much more striking in some cases than in others. Whether this effect is to be ascribed to galvanic agency yet remains to be determined. Mr. Faraday observes, (see Turner's Chemistry, sixth American edition, page 399,) that an alloy of steel with one-hundredth part of its weight of platina, dissolves with effervescence in diluted sulphuric acid, so weak as scarcely to act on common steel; a fact which he accounts for by ascribing it to the steel being rendered positive by the presence of the platina.



I have watched the effects produced by the application of this preparation, and the result of my observation has been such as I have stated above. I am now engaged in investigating the subject of the different amalgams that have been in use, in reference to their influence upon the general health; and I hope soon to be able to give the opinion of some of the highest medical authorities in Europe, upon a question which has elicited so much discussion, and which, in reality, is one of the greatest importance.

In giving publicity to this preparation, the object was not simply to make known the result of my experiments, but also to invite the attention of the profession to a subject so peculiarly important as that of discovering a material to be used *in those cases in which the circumstances might seem to indicate the expediency of employing a soft filling*, and to take the place of the compositions deemed objectionable, already in use. Experience, the great test in such matters, has furnished a result not so favorable as was anticipated by many members of the profession, who had expressed their decided approbation of this preparation, and who seemed perfectly confident that it was destined to fill a great desideratum which had so long been felt.

Whatever may be the hopes of others in regard to this preparation, *I have never* considered it as a substitute for gold—I have regarded it as a mere expedient, to be resorted to only in *peculiar* cases.

In regard to its influence upon the general health, in the opinion of those whose authority is entitled to weight, it is not injurious in this respect. *I cannot, however, refrain from stating it as my deliberate opinion, that all operations in which amalgams are employed are merely temporary in their nature, and that any tooth that can be filled in a PROPER manner with GOLD, can be effectually and permanently saved only by this means.* This is the opinion which I have always entertained, and I adhere to it at the present moment with undiminished confidence.

Yours respectfully,  
THOS. W. EVANS.

15 Rue de la Paix.

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For the Dental News Letter.

## DUBS' PATENT COMPOUND UNION SCREW FORCEPS.

TO THE EDITORS OF THE DENTAL NEWS LETTER :

*Gentlemen,*—From remarks I have recently seen in the Eastern journals of Dental Surgery, I find that more than one editor is acting under a misapprehension, in regard to my invention of the Compound Union Screw Forceps; and some have gone so far as to intimate, either, that the improvement or invention was of little use, or that it had been invented previously by some other person, or that what I claim as my peculiarity of the invention, added nothing to the principle, and gave no additional value to the instrument. Living thousands of miles distant from the publication

offices of these journals, and having taken but little pains to communicate the particulars of my invention to the profession, living so distant from my home, I do not know that I ought to be surprised, that erroneous, if not malicious views should prevail, especially under the opinion entertained by many Dental Surgeons, that it is unprofessional to obtain a patent for any improvement whatever. A due regard to my fame, and strict justice to the purity of my motives, requires that I should avail myself of your kind offer, "to publish any thing from my pen in the way of a plain statement of facts in substantiation of my claim." This shall be done in as brief a compass as possible.

In 1842 and 1844, my mind was led to the improvement of the instruments I used in Dental Surgery, a number of which I made for myself, being enabled to do so with accuracy and beauty, from knowledge obtained in a branch of the arts in early life. I commenced to improve the forceps, then in use for extracting decayed teeth, or their roots after the decay of the teeth. My book of drawings kept from that time, shows the progress I made from time to time, as I invariably made a drawing of my conception before I put the improvement upon metal. In getting out the material for my instrument, I was in the habit of applying to Mr. S. Odell, a respectable artist and gunsmith of Natchez, now on a visit to the northern cities, who is ready to bear testimony to my labors, designs and improvements from the before mentioned early commencement, up to 1846 and 1847. When I had brought my Compound Screw Forceps to the perfect state in which they now are, my books recording my various dental operations, show from 1846 with what instrument I operated, and contain a history of the work done by the aid of my invention, and various individuals of the utmost respectability, are ready to bear me witness of the superior skill and ease with which the most difficult cases of extraction were performed by the aid of my instrument.

It had been my intention to present my beautiful and now perfect instrument to the dental profession, and wrote a letter to Mr. Wm. Leach, of Baltimore, requesting him to inform Professor Chapin A. Harris, M. D., of the Dental College, and a distinguished author on dentistry, that I had invented such an instrument, and intended to present him with one if he would accept it. I received an answer from Mr. Leach, that Dr. Harris was absent, but that he would convey my wishes to him on his return. Since which I have heard nothing more of the matter.

Shortly after this time, being bitterly assailed by enemies who attempted to make the public in Natchez believe that I had either invented nothing, or stolen my invention from some one else, my friends advised me to secure a patent, and thus ensure to myself and family the honor and profit of my invention. I accordingly sent on my specification, and entered my caveat in the patent office in the early part of 1847, to secure my right.



although I did not receive my letters patent until October, 1848, some sixteen or eighteen months after the date of my caveat. The following precise words taken from my specification, and now in my letters patent, show all that I claim as my invention: "What I claim as my invention, and desire to secure by letters patent, is the combination of the notches\* (B) of the screw (A) with the catch of the click (D), by means of which the screw affords additional power in extracting roots of teeth as *above described*."

Previous, and between the period of entering my caveat and securing my patent, I heard, or read in the advertisements of instrument makers, of a Screw or Root Forceps, and wishing to know if it trenched upon the principles of my instrument, I sent on an order to Mr. J. D. Chevalier, instrument maker, of New York, who sent me two, and letters of the dates of February 20th, 1847, and July 15th, 1847, where he stated his price was for his extra quality Screw Forceps \$3 50 each. The instrument I then obtained, I sent on to the patent office, to show the commissioner that my invention did not in the least trench upon or conflict with that instrument, of which I retained the other, being the same kind as I sent to compare with my invented patent instrument, which is now deposited with my own model in the patent office. Having received little but abuse from many members of the dental profession, it will not be wondered at, that I shall rigidly protect the right which the laws of my country have given me, and prosecute any manufacturer, who makes or has made instruments on the "principle of the ratchet and spring," &c., which I invented, and claim to be its originator.

Very respectfully, &c.,

C. H. DUBS.

Natchez, August 16th, 1849.

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For the Dental News Letter.

MESSRS. EDITORS,—As you propose making public, through your truly valuable periodical, any cases of irregularity of the teeth, &c., that may come under the notice of your correspondents, I shall now endeavor to give you an imperfect sketch of a case I had an opportunity, a few days since, of examining, and as I have never seen a case precisely similar, though it may not be uncommon, yet I confess it has, to me at least, the charm of novelty, as being a most singular instance of malformation. It is not, strictly speaking, an imperfect formation, but a somewhat remarkable elipsis, (if I may use the expression,) by which nature seems to have left out, by some extraordinary process not easily understood, a portion of the elements so necessary to the perfection of the anatomical machinery of man.

\* As no cut accompanied the communication, we were compelled to publish without it; however, it will be plain to all those who have paid any attention to the matter.—ED.

The singularity of this case consists in an entire want of the *Superior lateral Incisores*, and the *first Bicuspid*s in the lower jaw; the *cuspidati* appearing in place of the superior lateral incisores. Or when they should have been more pointed, slightly inclined backwards, and considerably longer. In the lower jaw the formation is, if possible, still more singular, there being, as I have just mentioned, a total want of the *first bicuspid*s, the second of which presents the appearance of a large *molar*, there being no perceptible difference between it and the first and second molar, with the exception of the outer grinding surface being somewhat raised, and of that peculiar formation which distinctly marks it as a *bicuspidati*.

The individual from whom this sketch is taken, is past the age of forty-five, of robust health, but as yet the *dens sapientia* have not appeared, nor is there the slightest indication of there being an *alveolar* containing a gum for their production; and from a critical examination of all external appearances, I think I may safely assert, that no such gums exist for the production of the *dens sapientia*.

I was most positively assured by the subject of this notice, when questioned, "that he never had a tooth extracted in his life." Another singularity attending this case, is an uncommon *depression* of the *palatal arch*, a thickening of the *alveolar processes* upon the inner side, to such an extent, which, owing to their projection, causes the lining membrane, together with the gums upon the inner side, to approach very nearly the grinding surface of the tooth. I herewith enclose you a hasty drawing of the mouth, taken from a cast which is now before me. You will perceive that this peculiarity in the formation, gives to the mouth an unpleasant and somewhat terrific expression. Owing to the length of the *cuspidati* it is with exceeding difficulty that the lips can be made to approximate, the superior dental arch being much larger than that of the lower jaw, which, with the projection of the central and lateral incisores, and *cuspidati* of the latter inwardly, adds nothing to the general appearance of the physiog; but the *tout ensemble* is, I assure you, any thing but a pleasing one to the eye of the stranger, raising in his mind strangely blended ideas of the monkey and canine, with the genus *homo*, combined with, perchance, a feeling a little akin to disgust, so strongly colored with the ludicrous, thus makes it somewhat difficult to prevent giving a risible expression to the "workings within."

I find, Mr. Editor, that I have run this little sketch entirely beyond the limits originally assigned it, and as it is written in very great haste, I hope your readers will forgive me my *tour d'expression*.

I am, dear sir, very respectfully yours,

Q. C. GRASTY.



For the Dental News Letter.

## FILLING TEETH.

Having seen several articles in the News Letter on the filling of teeth, describing the operation differently from what I perform it, I take the liberty of detailing the method which I have practiced for six years past.

The cavity I prefer to have of a cylindrical shape, the *depth* a little *greater* than the *diameter*. Of course, it is impossible, in most instances, to obtain this shape, but that is the standard to which I approximate as nearly as practicable. The *opening* to the cavity should be as large as it is within; and I prefer that it should be larger, rather than smaller. When the diameter of the orifice is *less* than the cavity within, it is extremely difficult to fill it *perfectly solid*; there will almost always be a slight space between the gold and the walls of the cavity, and should this be the case, the tooth will eventually become discolored, and decay. On the other hand, even if the opening is considerably larger than the interior, a plug may be inserted in the manner I am about to describe, and if well done, cannot be otherwise than perfectly *solid*, and perfectly *full*. The slight *roughness* of the tooth will prevent its coming out.

When the cavity is properly prepared to receive the gold, roll up a leaf of foil, (or fold it flat,) and cut it into pieces of different lengths and sizes; then take a piece which is somewhat *longer* than the depth of the cavity, and place it therein, having one end on the bottom, and the other project somewhat beyond its orifice; then press it against the *sides* of the cavity, and make it as *solid* as possible. Proceed in this way until the cavity is *full*, so that no more foil can be introduced; then, with a plugger considerably less in diameter than the cavity, press the projecting gold down against that within the cavity, as compactly as possible; then with a file or other instrument, remove all the gold beyond the edge of the cavity; then polish and burnish the surface of the filling as *highly* as practicable. If the *depth* of the cavity is about *double* its *diameter*, I make *two* layers of gold, in the same manner as above described. A tooth filled in this manner will not lose its filling piecemeal; if any comes out, it all will, at once, and the patient is immediately warned to consult his dentist. But it is rarely the case that this will happen. One very great advantage of this method is, that the operator may be sure of having the cavity *full* and *solid*. Many dentists too often find on pressing in the last part of the filling, that the cavity is *not quite full*, and there is not room enough remaining to put in any more, but by proceeding in the above manner, they may be sure of invariable success.

H. S. CHASE, M. D.

Woodstock, Vermont.

For the Dental News Letter.

## FLAGG'S LATERAL CAVITY PLATES.

MESSRS. JONES, WHITE &amp; Co.

*Gentlemen,*—The operation for adjusting an entire upper set of teeth to the mouth, is one of great delicacy, and often presents difficulties the most experienced in our art are not altogether prepared to meet. I have reference to those cases that depend entirely upon atmospheric pressure for their adhesion.

The purpose of this communication is to recommend to the profession a plan which I have recently introduced in my practice, with the most satisfactory results; and the purpose of the invention is the more perfectly to secure to the upper jaw artificial teeth, when recourse is had to atmospheric pressure; to prevent the rocking or canting of such teeth, when antagonized by the under teeth in mastication, and to restore the upper jaw to its original fulness, so desirable to retain a natural tone of voice.

I am aware that "cavity suction plates" have been more or less used for many years, of various construction, with different degrees of success; and that one has more recently obtained letters patent, under the name of "central cavity plates," for the greater adhesion to the roof of the mouth; but these have required that much metallic substance should be carried over the entire bony palate; conflicting with the sense of taste, and having its *chamber* so located as to cause a protuberance in the mouth, entirely at variance with all anatomical formation; inducing changes from the natural tone of voice, difficulty of articulation, and other serious complaints from many who have resorted to them.

The nature of my invention consists in so forming the plate, upon which the artificial teeth are secured, as to perfectly fit the jaw in all its parts, as at present ordinarily practiced, except in that portion of the dental ridge immediately behind, and in line with the grinding or molar teeth. At this point I recommend that the plate be made sufficiently depressed to have no bearing upon the jaw, thus forming *lateral cavities* or chambers, which, when exhausted of the air by suction, secures the whole plate firmly in its proper position. This depression of the plate, also, restores to the jaw that fulness which it had lost by absorption, consequent upon the extraction of teeth.

The alteration which I make in the plate, is accomplished in the following manner: After obtaining an accurate impression of the jaw, in wax, I cut out a portion of the wax along the line of the grinding teeth upon each side of the mould, about one inch in length by three-eighths in width, and one-tenth in depth, of an oval and cup-like form; taking care not to warp or otherwise alter the general character of the mould. Into this wax mould I cast my plaster of Paris; this plaster cast, when sufficiently *set* or hardened, I remove from the wax, and trim with a knife suit-



able to prepare the necessary metallic casts for striking up the plate. Should the plate not fit the jaw perfectly from this impression, I recommend that a similar plate be made of *sheet lead*; adjust this lead plate to the jaw, *taking care not to derange the suction cavities*; and, by placing this lead carefully into the former wax mould, cast the plaster once more into it and proceed as before.

I remain gentlemen, truly yours,

J. F. B. FLAGG, M. D., *Surgeon Dentist.*

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For the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

A stated meeting of the society was held at the usual place, on Tuesday evening, October 2, 1849. Dr. Parry, President, in the chair, and Mr. A. R. Johnson, Secretary.

Minutes of previous meeting read and adopted.

The Examining Committee reported the name of Mr. J. McQuillan, as a candidate for membership, and recommended his election. According to the constitution, an applicant for membership, after being recommended by the Examining Committee, shall not be balloted for until the following stated meeting.

Committee on Evans' amalgam reported progress, and were continued.

Corresponding Secretary reported that he had attended to all his duties.

Treasurer's report showed a flattering state of the finances.

As this was the annual meeting, the society went into an election for officers to serve the ensuing year.

The following gentlemen were declared elected:

Mr. C. C. Williams, President, Dr. James Fleming, first Vice President, Dr. C. H. Bressler, second Vice President, Dr. J. D. White, Corresponding Secretary, Mr. A. R. Johnson, Recording Secretary, Mr. F. Reinstein, Treasurer. Examining Committee, Messrs. F. Reinstein, S. L. Mintzer, W. R. White, A. R. Johnson, and Dr. E. Parry.

Report of Committee on Cabinet and Library, including a paper for library regulations, was read, and taken up and passed, article by article. After which, they balloted for a Librarian, which resulted in the election of Mr. Samuel Stockton White. After which they adjourned.

As this was the annual election, but little else was done, as will be inferred from the preceding report.

We were pleased at one thing, and that was, the interest manifested in the Cabinet and Library. This can be made an useful auxilliary, and we are persuaded, that much will be done by this association towards forming a good Cabinet and Library.

For the Dental News Letter.

MESSRS. JONES, WHITE AND McCURDY:

GENTLEMEN,—If you think the following worthy a place in the News Letter, you have my permission to insert it.

Miss V. E. N., of this county, lost three of her permanent inferior incisors, at about eleven or twelve years of age, from severe pytalism. They were suffered to remain a long time after the action of the calomel, but being loose, and causing considerable pain, they were removed when it was evident they would finally fall out if not extracted. The mother of the young lady, with a mother's anxiety, inquired of a physician if the teeth that were lost would be renewed. His answer was, "No, it is too much to ask of Madame Nature that she should furnish teeth a third time." But, in a year or more, (the parent, from whom I have this account, does not remember as to the precise period,) perhaps it was two years from the removal of the teeth, the parties interested were agreeably surprised by seeing their loss supplied by three others. This occurred some seven or eight years ago. The teeth of third dentition are of full size; well organized and beautiful, with no apparent difference in their texture from those near them, and bid fair to be useful so long as they may be needed.

A. BERRY, D. D. S.

Raymond, Miss.

## ALLOPATHY.

Take some calomel,  
The more you take the better;  
Mix it with a drop  
Or two of cistern water.

Feed some to your dog;  
It will make him vomit,  
And, may be, see stars,  
And perhaps a comet.

Once in each half hour,  
Take a rousing potion;  
Say, a thimble full,  
If that suits your notion.

Should you chance to die,  
As you're almost sure to,  
You may safely swear  
That it did not cure you.

## HOMŒOPATHY.

Take a little rum,  
The less you take the better;  
Mix it with the lakes  
Of Wener and of Wetter.

Dip a spoonful out—  
Mind you don't get groggy—  
Pour it in the lake  
Winnipisiogee.

Stir the mixture well,  
Lest it prove inferior;  
Then put half a drop  
Into Lake Superior.

Every other day,  
Take a drop in water!  
You'll be better soon;  
Or, at least, you ought to.

## HYDROPATHY.

Take the open air,  
The more you take the better,  
Follow Nature's laws,  
To the very letter.

Let the doctors go  
To the Bay of Biscay,  
Let alone the Gin,  
The Brandy and the Whisky.

Freely exercise,  
Keep your spirits cheerful,  
Let no dread of sickness  
Make you over fearful.

Eat the simplest food,  
Drink the pure cold water,  
Then you will be well,  
Or, at least, you ought to.



# THE DENTAL NEWS LETTER.

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OCTOBER, 1849.

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*Enlargement.*—In our last number we made the proposition to enlarge the present volume, if we had the assurance, that sufficient matter would be furnished by members of the profession. At the time we made the offer, we hoped it would bring out a host of correspondents, as we expected their professional pride would be touched, and that we thus should be supplied with abundant matter to make a good sized, able quarterly.

Surely, we reasoned, they will sustain their profession,—they will be prompt to say something in its favor,—they will evidence their desire to contribute their mite to the common fund. The issue was with them, and we thought they could not keep silence,—that they must come out; but, alas for dentistry, what was the result? Why, instead of at least fifty, ten promised their aid in the way of communications. *Ten* to represent *three thousand*. What a commentary on professional pride.

To those ten, we return our grateful acknowledgments; and at the same time, trust, before the issue of our next number, to add many more names to our list of contributors.

It will now be easily seen, why we have not enlarged. The assurances given us would not warrant it. We shall, therefore, jog along as heretofore, until the members of the profession shall come up to the work, and encourage our “Letter,” by elevating their profession to the stand it is entitled to take; and this can be done in a great measure, by each promulgating his views and reporting his cases. When this is done, we shall have abundant matter,—interesting and instructive,—and none will have excuse for malpractice or ignorance in their profession.

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*No. 1, Vol. 1, Dental News Letter.*—If any of our readers have this number, and are willing to spare it, they will oblige us by mailing it to our address. The whole edition was exhausted long since, and we have use for a number of copies of this issue.

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We neglected to publish in the last number, a table of contents for the first and second volumes. We now design to publish it, including the contents of the third volume in the fourth number of the present one, when the whole three volumes can be bound together.

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This number is printed with new type, which improves the appearance very much, as our readers will acknowledge.

*Fusible Metal.*—The following receipt has been sold to some of the dentists, and is said to be a valuable one. We paid five dollars for it, and thus give it to the whole profession.

No. 1, OR HARD.				No. 2, OR SOFT.			
Bismuth,	-	-	8 parts.	Bismuth,	-	-	$8\frac{1}{2}$ parts.
Lead,	-	-	5 “	Lead,	-	-	$5\frac{1}{4}$ “
Block Tin,	-	-	3 “	Block Tin,	-	-	$3\frac{1}{4}$ “
Mercury,	-	-	2 “	Mercury,	-	-	$2\frac{3}{8}$ “

No. 1, is for the male. No. 2, for the female cast. The lead should be melted first, then add the tin, and when they are well melted, pour the bismuth into the lead and tin. (The bismuth should be ready melted in another vessel.) The mercury should be added slowly. None of the metals should be hotter than just sufficient to amalgamate.

This preparation is poured into the wax impression, which was previously well hardened; thus saving the trouble of taking plaster models, and of moulding in sand.

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*Dubs' Patent Forceps.*—In this number will be found an article from Mr. C. H. Dubs, in reference to his patented forceps. There were other documents accompanying it, all of which tend toward substantiating the statements therein made. Without wishing to identify ourselves with the controversy, we feel free to publish all that is offered on the subject, that is of interest, and free from personalities; and say, “Let justice be done, though the heavens fall.”

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*To Harden Plaster.*—A correspondent speaking of the difficulty in taking impressions with plaster of Paris, says, “I found it required to be left too long in the mouth, in consequence of the plaster hardening so slowly; I therefore mixed my plaster with salt water, by which means it hardens in less than half the time.” This is worth a trial.

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*Patent Enamel for Plates.*—On the last page of cover will be found Dr. Levitt's advertisement. We have been shown the testimonials referred to, which are of the highest character, and speak strongly in favor of this article.

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*Twenty Dollar Gold Medal.*—The Mississippi Valley Association of Dental Surgeons, offered a premium of a Gold Medal, for a hundred of the best teeth, including plate, pivot, molar, bicuspid and gum, and a Silver Medal for the second best. The meeting was held on the second Tuesday of September last, in Louisville, Ky. A friend who attended the meeting writes us, “your teeth have received the first premium, a *Gold Medal*, worth twenty dollars.”



*Adhesive Wax.*—A correspondent writes us that he had much trouble to make the teeth stick to the plate, while preparing them to try in the mouth, until he heard of a preparation used by Dr. Griffith, which was an addition of whiting and Venice turpentine to beeswax. Since then, however, he has tried a composition of Burgundy pitch and whiting, which he thinks even superior to Dr. Griffith's preparation, as being more tenacious. He prepares it by working the pitch soft in his fingers, and adding whiting until it becomes somewhat brittle.

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*Spittoon Tops.*—We have received a large lot of these from England, made of stone china, of a good shape and strong.

An article of this kind has long been wanted, and after repeated unsuccessful attempts to have a neat article made in this country, we were compelled to order them from Liverpool.

They will, we think, please the majority.

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*Evans' Amalgam.*—We have not, as yet, received the long expected supply of this article.

From a letter from Mr. Evans, which will be found in the present number, it will be seen that he exercises great discrimination in the use of it, and does not by any means recommend its use, excepting in particular cases.

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We have ordered from England, a few more copies of Tomes' Lectures on Dental Surgery, having disposed of all previously received.

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We have ordered a supply of Palladium from France, in consequence of an increasing demand for it. We expect to receive it by about the first of November.

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*"Nothall & Holmes' Journal."*—This is a small, but neat sheet, published monthly by the above named gentlemen, at Brooklyn, N. Y. It contains much that is of interest, on the diseases and management of teeth, to heads of families, for whom we presume it is designed.

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*"Dental Pearl."*—This is a similar sheet to the above, and for the same purpose; published monthly by C. A. Peck, N. Y.

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*Blowpipe.*—We have a new article of blowpipe, which is in a cylindrical form, about seven inches high and six inches in diameter. It is a double bellows, and can be worked easily with the knee, or can be fitted with a treadle. It has a long leather tube, with a coil of wire inside to keep it distended, and can be turned in any direction. It is a very compact and useful article, as it works well, and can be sold for five dollars.

*Springing of Plates in Soldering.*—Mr. Sherwood, in a communication to the “Dental Recorder,” speaking of the frequency of plates warping in soldering: says, “I swedge the plate after the teeth are soldered on. I do this by casting a matrice with a vacant space for the teeth, and I construct it in the following manner: I take the model of the jaw, to which I fit the plate, and wetting plaster of Paris, rather thick, I build it on the ridge of the jaw, against which the teeth rest, and an inch or more high. When the plaster has set, I pare it off smooth, and cast the lead on the die as high as the plaster. When it is cool I take the plaster out and try the plate. If the teeth touch, pare off the lead until they do not hit in the least; then putting the die and matrice together, I bring them down with a few smart blows. The most refractory plate is subdued to a perfect fit instantly.”

Another plan, proposed by Dr. E. Taylor, in the “Dental Register of the West,” is as follows: “I take an iron wire, the size of a knitting-kneedle, bend it double, the strands one-fourth of an inch apart; take a small wire, and fold on the other back and forward, so as to make a net-work. The whole, when completed, should be the length of the labial surface of the teeth, and curved to correspond with the job to be soldered. When the job is put into the plaster and sand; and we use for this a cast-iron box; the net-work of wire is embedded in the plaster and sand, outside of the teeth, and between them and the border of the cast iron box. This net-work of wire is thus filled with the plaster; and in heating, holds the plaster and sand together, so that the heat requisite for the process of soldering will not crack it. An additional wire might thus be placed in the concave surface of the plate, and thus give additional security to it.”

Dr. Harris in the “Baltimore Journal,” says: “The plan we adopt is simple, and almost always successful. It is simply to anneal the plate on the plaster model, after having first bound it down closely to it.”

Others suggest using heavy plate, say No. 26, the common wire gauge, and mixing from a half to two-thirds common sand with the plaster.

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### CANCEROUS ULCERATION OF THE LOWER LIP; HISTORY AND PROGRESS OF THE DISEASE; OPERATION FOR ITS REMOVAL; CURE.

WILLIAM C——, aged fifty-eight, a laborer by occupation, applied to Mr. Gay, at the hospital, Sept. 7th, 1848, for admission, in the hope of having some relief afforded for an ulceration of a cancerous nature of the lower lip. On examination, the cancerous destruction is found to have involved the structures in the neighborhood to a considerable extent. The centre of the lower lip, chin, and front portion of the lower jaw-bone, as far as the inferior border of the symphysis, are completely eaten away, leaving the bone bare, the edges of the ulcerating portion of the



chin and skin in the vicinity being united to the corresponding portions of the bone itself. The portions of lip remaining on either side of the central fissure are much enlarged and indurated, the edge being everted, giving the appearance already described. The central portion of the jaw-bone in front is in progress of destruction, and of a dull yellowish color. The discharge is very offensive and copious, and the man's condition is so disgusting to him, that he is willing, and indeed anxious to submit to any operation that would relieve him of the diseased mass. He states that the first appearance of the disease was in the form of a pimple near the angle of the mouth, on the left side, three years ago; it was hard and painless, and remained stationary for twelve months, at which time it began to ulcerate, and extended itself gradually towards the median line. He had caustics applied at intervals by different medical men, and subsequently he applied to one of the hospitals, where several attempts were made to destroy the diseased parts by caustics of a powerful nature. The ulceration, however, now rapidly extended itself, destroying the lower lip and adjacent structures, presenting the usual appearance of cancerous ulceration in an advanced form, and producing a most unsightly and hideous appearance. Mr. Gay having attentively examined the parts, and considering the chances of relief which an operation held out, determined to endeavor to remedy the old man's distresses.

*Sept. 13th.*—The patient being placed under the influence of chloroform, by Mr. Robinson, Mr. Gay, assisted by Messrs. Wakley and Coulson, began his operation, by making an incision on both sides of the cheek, directly backwards from the angle of the mouth, for the distance of an inch and a half. The divided vessels were at once secured from the extreme point of these incisions; others were made downwards, meeting at a point about an inch behind and below the chin, embracing the whole of the diseased skin. The diseased soft parts were then dissected away from the osseous parts, to which they were connected, by a few strokes of the knife. It was then found necessary to remove about an inch and a half of the central portion of the jaw-bone, which was speedily effected with a small saw. The wound was large, and it became somewhat problematical how it should be filled up, whilst the formation, and almost the position of the mouth, were left at the taste and discretion of the operator, by detaching the under portions of the cheek on either side, and drawing them together, and upwards at the same time, bringing the two cut edges of the jaw-bone into opposition; it became apparent that plenty was left to fill up the vacuity. Mr. Robinson, the dentist, then skilfully fastened the two ends of the jaw-bone together by casting ligatures around the teeth. This done, and the parts being brought together by suture, the patient presented an appearance which justified the anticipation of relief from his disgusting malady without much disfiguration. The lower lip,

which was formed by a straight cut surface, was arranged so as to be even with the teeth of the lower jaw. No teeth were extracted previous to the commencement of the operation, Mr. Gay stating that he had not, in his practice, found it necessary in operations on the lower jaw.

The effects of the chloroform having subsided, the patient was put to bed; and two hours subsequently to the operation, expressed, by signs, that he was comfortable. A draught, containing one grain of muriate of morphia, was given at bed-time.

14th.—Has passed a comfortable night, and is free from pain.

15th.—Bowels have not been relieved since the operation. The wound, which was dressed this morning, looks healthy; slight discharge of a healthy character from its surface. To have a dose of house-medicine. Diet to consist of strong beef-tea, light pudding, and four ounces of wine daily.

The details of the subsequent treatment of this case are needless. The wound was dressed daily, and the greater part healed by the first intention, a few exuberant granulations requiring the application, from time to time, of the nitrate of silver. The case progressed very favorably, and the man left the hospital, a few weeks after, at his own request, with the relief perfect, so far as the removal of the disease was concerned by operation. The tongue could be partially protruded at the time of his leaving the hospital, and articulation, although confused, was tolerably good, considering the interference with the parts concerned in the operation.

It ought also to be mentioned, that immediately, and for some time after the operation, he was unable to swallow, so that it became necessary to place his food (which was for the most part of a liquid kind) in the upper part of the pharynx, by means of a long tube constructed for the purpose.—*London Lancet*.

*Extract of a letter to the Baltimore Editor, from MR. ANDREW WILSON of Edinburgh, dated May 16, 1849.*

SIR,—Having lately been perusing your valuable work on dental surgery, I find that the method recommended for backing mineral teeth, differs considerably from that practiced by me, and which as I think preferable, I will briefly describe, so that you may judge for yourself. After having partially fitted the tooth to the plate, take a piece of thick platina foil, (as thick as can be used conveniently,) and pressing it against the back of the tooth, perforate it where it is marked by the pins, then cut it into the shape of the back as wished to be, and press it as closely as possible to the back of the tooth.

It will now be requisite to apply a little borax to the platina pins which come through the back, and placing the tooth with its face downwards upon a thin piece of pumice, covered with dry plaster of Paris, put several pieces of gold (according to the thickness required) upon the platina back, slowly heat it, gradu-



ally raising the heat till it is considered safe to melt the gold with a blow-pipe, when, upon continuing the blast, the gold will rapidly flow over the whole platina surface, incorporating so accurately the pins in the tooth, that I have never seen a case of their being withdrawn when the tooth has been broken, during the whole time it has been in use here, (nearly eight years,) they always remaining firmly fixed in the backing upon the plate.

After the backing has been run and the tooth allowed to cool slowly, it is filed to the requisite thickness and shape, when, being closely fitted to the base, it is finally soldered to the plate, as described in your work. We generally use a mixture of fine sand (white) and plaster of Paris, equal parts, for encasing the piece, and also place a thin curved strip of platina in front of the teeth, having a layer of the above mixture on both sides of it, so that should the plaster crack in the soldering, (although it is less liable to do so than plaster alone,) the platina keeps the teeth from shifting their places. The whole time occupied in heating and backing a tooth occupies about half an hour, and when several are doing at once a very little longer.

We generally employ the same method in making ready the base of a mineral pivot, instead of the tedious process of making casts and striking a plate, and fitting a great deal better to the root, (in consequence of the contraction of the metal during its cooling,) of course all that is required for attaching the pivot, is to perforate the platina base and passing the gold wire through it, solder it to the platina, and run gold over the surface of the platina at the same time.

The following are the formula computed and employed by my father, (the late Mr. Wm. Wilson, dentist,) for either reducing or raising the fineness of gold to any required standard.

1st, Let  $a$  represent twenty-four carat of fine gold.

$w$  its weight, and  $b$  the required carat, then the weight of allow to be added is  $\frac{a-b}{b} \times w$

2d, Let  $a$  represent twenty-four carat gold.

$b$  the required carat.

$c$  that to be raised, and

$w$  its weight. Then will  $\frac{b-c}{a-b} \times w$  be the weight of fine gold required to be added. Thus, 1 oz. 16 carat =  $13\frac{1}{2}$  g. and  $6\frac{2}{3} a$  (2.1) and adding 1 oz. = 20 g. We have got  $33\frac{1}{2}$  g. and  $6\frac{2}{3} a$  (5.1) or 2 oz. 20 carat as by the formula  $\frac{20-16}{24-20} \times w = 1 \times w$  or an equal weight of fine gold.

Of course the proportions of the alloying metals depend upon use, color, and hardness required.

The above methods may be in more general use, than I know of, as in *this country*, from absurd and mistaken notions. No one can say what methods another practitioner may employ.

*Am. Jour. and Lib. Dent. Science.*

# THE DENTAL NEWS LETTER.

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Vol. III.

JANUARY, 1850.

No. 2.

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## ADDRESS,

*Delivered before the "Pennsylvania Association of Surgeon Dentists," at a Stated Meeting in Philadelphia, Dec. 4, 1849. By JAS. FLEMING, M. D., of Harrisburg, Pa.*

GENTLEMEN—It is not without some reluctance that I offer you any thing at present by way of an address. An absence of more than a year from your stated meetings, has made me quite unacquainted with the subjects that have most engaged your attention. But as you have done me the honor to solicit my co-operation, and have extended to me the friendly hand and the cordial welcome, I cannot refrain from at least expressing my willingness to contribute, so far as in me lies, to the furtherance of the excellent objects you have in view, nor from giving utterance to my best wishes, both for yourselves, personally, and for the good cause itself, which you are associated to promote.

It is to me a source of no ordinary degree of pleasure, to meet thus in a social relation, a portion of my professional brethren, who, animated by the love of science, and prompted by a high-minded spirit of philanthropy, have come together "for the purpose of promoting the honor, character, and interests of the Dental Profession." I regret, exceedingly, that I cannot meet with you more frequently, and derive both the pleasure and profit of participating in your deliberations. I love the cause, and I honor the self-denying spirit of those who are engaged in it. It is a work of benevolence; and there is one reward, at least, which you will reap for your efforts:—it is that which arises from the consciousness of doing good.

There is no profession, I believe, which embraces, in proportion to its number, so great a variety of talent and *character*, as the Dental; and there is none, perhaps, in which the requisite qualifications, for successful practice, are less generally appreciated. For, while it may be true, that both here and in many other places, the importance of skill and faithfulness in dental practice may be properly understood by the majority, it is also true, I am persuaded, that in comparison with the remainder in these places, and elsewhere throughout the State, the proportion will be found to be but small; and of these, the majority, perhaps, will be found to have no conception of it. This is the reason why *quackery* has stalked abroad with so much boldness and effrontery. The door



has been widely thrown open for the practice of every species of empiricism and imposture.

The effort to remove this wide spread evil, is, I say again, a work of benevolence; and one that calls loudly for the united energies of the Profession, in order to carry it successfully onward. Already have the best of minds been moved to noble efforts in this cause, and their success has indeed been great. It is certain, however, that there is yet much to be accomplished; the light of truth and science must be still farther disseminated, and the line of distinction between skilful and empirical practice must be more clearly defined, and its importance made more apparent. Our professional standard should be elevated, and so placed, that all may see and appreciate its importance.

One of the means for accomplishing these ends, is, undoubtedly, the establishment of a proper system of *Dental Education*. And, connected with this subject, are some thoughts and opinions, which I may take occasion to present, at some future time, for your consideration. At present, I shall only take the liberty to say that I think the Profession owe it to themselves and to the public, to establish out of the talent it possesses, some creditable institution for this purpose; and I trust the day is not far distant, when a *Dental College* will be located in Philadelphia, of the same high tone that so distinguishes her Medical Institutions. This idea is, perhaps, not a novel one to any one of you; but it is one, nevertheless, which I think is peculiarly worthy the consideration of this Association.

The demand for such an institution is, in my opinion, daily increasing. When we look back over the history of dental science, we scarcely know which to admire most, the rapidity of its growth, or the great degree of perfection to which it has already attained. It is, at the present day, compared with *medical science*; a *living picture* of its history and growth through the long series of ages in which it has been cultivated. We are cotemporary with names which must ever stand amongst the first and highest in the future history of our profession; we could point to our Good, our Hunters, our Sydenham, our Armstrong, our Mackintosh, our Arbuthnot, our Cullen, our Abernethy, our Baillie, our Radcliffe, our Boerhaave, and a host of such names, taken at random, even to our Galen, Celsus, or Hippocrates. Yet we have, comparatively speaking, but few institutions for collecting together the scattered rays of light and truth, that emanate from scientific minds, and concentrating them upon the ardent votaries of our profession.

Such an institution must necessarily be an advantage, both to the profession and to the public. Its eleemosynary department alone, (which of course would be attached to it,) would be a means of doing much good, and must, necessarily, be of incalculable benefit to the student; besides, there is a want, which the

*medical* student often experiences, that might by this means be supplied. For dental surgery is a legitimate branch of the great healing art; and, I believe, that a thorough knowledge of the one, can never be properly attained without a correct understanding of the other. For this reason, I believe that an institution of this kind should embrace a very liberal course in the study of medicine. The Baltimore College was established upon this basis, and we point with feelings of pride to its growing usefulness. Let another of a similar kind be established in Philadelphia, and they will enhance the prosperity of each other.

If medical quackery is an evil requiring the united efforts of the profession to suppress, surely it is required in ours. The medical empiric is often less to be dreaded than the dental. The former will frequently deal out his nostrums with the most unblushing ignorance of all pathological science, and to the absolute hindrance of his patient's welfare; yet there is an ever-active principle within us, a restorative energy, which the Author of our being has implanted in our nature, that will overcome, to a truly wonderful extent, the obstructions and hindrances that are thus thrown in her way. The functions of life will again be restored to their healthy tone, and the empiric, perhaps, reap a rich reward for his supposed agency in the result! Not so, however, with the latter, or dental practitioner: the result of his treatment will be exactly in proportion to his ability and faithfulness. Nature has left this department of the healing art almost entirely free from her restorative agency, and time only serves to develop the evil consequences of mal-practice.

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There is one consideration, however, which the student of dental science will always have for his encouragement: it is that his study is, to a very great extent, that of a demonstrative science. There are certain fixed laws and established principles by which he will always be governed; and his ability to come up to their requirements in his practice, will always ensure him success. On the other hand, medical science is even yet, after the culture of ages, but a *science of mysteries*; and while it requires in practice, the very highest order of mind and intellect, the veriest empiric will often be found to outstrip the accomplished practitioner, on account of the very mystery that always attends success. "No profession," says Dr. Gregory, "requires so comprehensive a mind as medicine. In the other learned professions, considered as sciences, there is a certain established standard, certain fixed laws and statutes, to which every question must constantly refer, and by which it must be determined." In medicine, this standard and these laws can never be indisputably established. There is a degree of success, apparently, attending every system that is practiced upon; and to the unbiassed mind in search after truth, there is, undoubtedly, some-



thing instructive to be found in them all : it matters not by what name a system may be called, whether it be Heteropathy or Homœopathy, Hydropathy or *Herbopathy*, the truth will always be promoted by a fair observance of results. But death is in the world, and while he continues to lay his cold hands upon his victims, mystery will continue to surround the science of medicine.

Nevertheless, I believe there is no study better calculated to develope and exalt the mind, to create liberal views of human nature, and lead to habits of investigation and research, than this. Let the student, either in the Medical or Dental Profession, take up the history and writings of some of the most eminent medical philosophers, whose whole lives were devoted to the honor and interest of their profession, and the advancement of medical science, and if they do not partake of the same spirit that animated their bosoms, and find their own professional zeal quickened, and their ambition newly excited, they have certainly mistaken their calling.

In the history of the learned professions, there may be considered two very distinct eras : the first is that in which the profession derives its character from the men who are devoted to it ; and the second is that in which men derive a character from the profession itself. The first of these is evidently the one upon which we have fallen ; and for this reason every good dentist will feel the necessity of aiding in the establishment of Institutions and Associations which have for their object the promotion of the *honor, character and interests* of the profession. For it is only through such means, properly directed, that *the professional character will be elevated and sustained, and mutual improvement, social intercourse and good feeling promoted.*

I bid, then, the "Pennsylvania Association of Surgeon Dentists," God speed ! And may their future success in carrying out the objects for which they have associated, be commensurate with the past progress of Dental science, and with the onward spirit of the age.

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Communicated for the Dental News Letter.

## HOW TO PREVENT THE WARPING OF GOLD PLATES.

Several articles have appeared in the Dental News Letter, and several other periodicals devoted to subjects upon dental science, regarding the twisting or warping of gold plates, intended as the basis for artificial teeth, by the action of heat upon them whilst soldering the teeth to the plate.

The articles referred to, have been edifying, instructive and amusing. Instructive from the important facts which have been collected, and the amount of unwritten and unrecorded knowledge which has been constantly increasing, and which, by the

liberal and enlarged views ever observed on the well-filled pages of the Dental News, has gradually drawn the dental experience from their hiding places, to the great benefit of the whole dental profession. A few years since, it was a common occurrence, at least I experienced it to be so, that when inquiring of a professional "brother," in what manner he prevented his "suction" plates from warping, the invariable answer was, "My plates never do warp." Hence, the inquirer was not only led astray, but such statements at once led him into the conviction or supposition, that he either did not rightly understand his business, or otherwise, was a mechanical bungler. His pride, henceforward, would prevent him acknowledging such accidents as the warping of gold plates in his manipulations. Many thanks are due to dental periodicals, and those dentists with *cacæthes scribendi*. By these the dental mechanic has been from time to time furnished with the details of the complaints, confessions and remarks upon these untoward accidents in the practice of several of the members of the dental profession, which have exacted inquiries, how such results, from the application of heat to the metal, were brought about or produced, and by what method such vexing perplexities could be obviated or overcome. It is not necessary here, to review the remarks of the several writers upon the various supposed causes, and their modes of prevention, for such unfortunate terminations to all the skill, time and patience, devoted upon their labor; sufficient will it be, in your limited space, to show in as succinct a manner as possible, how such disasters may be prevented; nay, defied from the immediate commencement of taking in hand, the formation of the plate to the model of the palatine arch of the mouth, to the final blast of the blowpipe, to complete the workmanship of a complete set of teeth.

Some years since, I was not well enough acquainted with the metallurgy pertaining to the peculiarities of dentistical mechanism, to protect myself against the frequent recurrence in my laboratory of the accidents referred to. It was my fortune, at that period, to be engaged upon a complete piece of dental mechanism, comprising the upper and lower sets of teeth for the mouth of an eminent metalist and long established practical jeweler; stating to him these difficulties which frequently perplexed me. He at once gave me the so much desired information, both to myself, and, as I find, to my professional brethren, also. Years of experience, trials and attention to dental metallurgy, have confirmed the merits of the information which I received, and my experiments have exhibited the important fact, that the apparent difficulty of preventing the warping of gold "suction" plates for atmospheric pressure cases, can easily and most successfully be obviated. At present, it is impossible for me to clearly demonstrate, or even offer an opinion that will satisfactorily explain or be acceptable, regarding the *modus operandi* of the action of the agents I shall mention, upon



the gold. All I can offer, for the benefit of the readers of the Dental News, are the simple facts:—The gold being prepared for use, always bear in mind, that the gold as prepared and *alloyed* by Mr. A. Jones, is about the best quality to test their truth. If too much copper or *bad "filings"* be alloyed with the gold, warping of the plates is most certain to follow the application of heat. Also, using solder with too much copper, has the effect of contracting itself and drawing inward upon the face or line of solder, the gold basis upon which the teeth are fitted. The gold basis previous to being struck up or "swedged" (?) upon the dental die, should be heated to a dull red heat, and whilst in this state thrown it into common molasses; after which, it is to be heated again in a similar manner, and cast into the diluted sulphuric acid ("pickle,") and then struck up to the dental die; being properly fitted, repeat the process with the "pickle," and it is now fully prepared with little hazard of any warping from the effects of the re-application of heat, unless the heat applied is carried to such an extent as to "sweat" its surface. To make *certainty doubly sure*, the following precautions will repay the trouble bestowed. Presuming the teeth to be ground properly, fitted, and in close apposition with the gold basis, and encased with the usual protection of sand and Plaster of Paris. The heat should be applied to the base of the casing on the palatine gum side of the gold plate; and not to the lingual or teeth surface of the exposed gold and teeth linings. The observation of this feature in the operation of soldering is of great importance. The plaster casing thus first contracting at the base, binds the teeth close to the external or gum portion of the plate. The teeth, also, become heated with less hazard of their cracking. By heating the case first, on the lingual or teeth surface, the plaster is apt to shrink and contract its circle, so that the cutting lines or edges of the teeth are drawn inwards, and the superior lines or gum edges are drawn off and away from the gold plate, so that all the time and trouble devoted to a close fitting are lost to the operator, and the beauty of the work spoiled. This will, also, occur by the use of common gold solder. The copper, as I have before stated, contracting more than the gold, when it cools, draws the gold plate upwards and inwards towards the internal median line of the central incisors. It is, therefore, of importance, that the dental mechanic should not use solders at different times of various qualities. The larger the case, the more difficult will it be to manage a strange solder; be it weak or strong, or in other words, of a high or low carat in quality. This difficulty is often met with, in reparings done to atmospheric pressure cases made by other hands. A superior or inferior quality of solder being applied, causing the plate to warp from the above stated causes; and the dentist repairing the case has to submit to the remarks without being able to assign a reason for his apparent want

of skill. I have hurriedly penned the above few remarks, with what benefit to your readers I leave to them to acknowledge, after their experiments shall have tested its superiority.

Very respectfully,

A. C. CASTLE, M. D.

New York, December 10, 1849.

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The following is from an essay, read before the "Penna. Association of Dental Surgeons," at their meeting held Dec. 4, 1849.

### CARIES OF THE TEETH.

This malady, which is so extensive, has occupied the attention of the Dental Profession throughout the whole world. 'Tis true that much has already been done for its relief; but not enough has yet been accomplished, to crown our labors with invariable success. We must, therefore, not remain inactive, but seek constantly for further light on this subject, and increase our knowledge on a point so important to the health of these organs.

Caries of the human teeth, I am fully persuaded, is only occasioned by external agents. Close examination, convinces us that the enamel of a tooth must first be injured by a fracture, or decomposition, caused by injurious substances coming for any length of time in contact with it, before the bony substance of the tooth can be affected. The enamel, when perfect, and kept thoroughly clean and uninjured, cannot decay.

Caries takes place where there is a deficiency of this protection; as, for example, we find it very often in the indentations of the molars and the bicuspid, or between the incisors, where there is only a thin coating of enamel; and the acidity of the saliva, when in an unhealthy state, can act upon it, which is particularly the case in the irregularity of the arrangement of the teeth, when particles of food are suffered for any length of time to remain between them, which must decompose the enamel, and ultimately destroy the tooth. Also, a too sudden change of temperature, offensive roots of old teeth, depositions of tartar, particularly that of a green color, and which is so often found on the teeth of young individuals. But the most injurious of all, is the want of cleanliness; which, suffering the slime to accumulate and harden to tartar, causes, frequently, diseases of the vessels of the gum, which constitute an active poison to destroy the teeth.

Whatever tends to irritate and inflame the gum, *must*, in a greater or less degree, produce a corresponding irritation in the teeth, from their close connection to each other; and when we consider how very strong the secretions of the mouth are, capable of dissolving the hardest bone, we cannot doubt, that when changed by inflammation of the gum, or other causes, they can destroy the teeth.

Caries appears in three distinct forms, namely:—slow or dry, spongy and white caries.



The slow or dry caries, commences in a small brown speck, which gradually increases in circumference. The progress of it is slow, and it often takes years before a tooth is destroyed; where in spongy caries, when the enamel is once penetrated, the progress is more rapid. The decomposed bone is like cartilage, and can be detached from the healthy bone; where often the nerve will be found to be exposed.

White caries is still more destructive in its nature by the rapid progress it makes. It is rarely noticed by the patient, except by the soreness it occasions by taking cold, or warm fluid in the mouth, or by the peculiar smell it has; and often, before the patient discovers it, the tooth is already so far gone, that the only remedy is to kill the nerve, or extraction. This kind of caries looks like chalk, and decomposes a good deal of the bony substance of the tooth, before the enamel will break off. This led many to the theory of deep-seated decay; but we have too frequent opportunities to find that it had penetrated the enamel through pores, by decomposition or fracture. This is the most painful, by the inflammation that accompanies it, and is peculiar to persons of scrofulous nature and delicately formed teeth; and in young persons where cleanliness is not practiced. Mr. L. S. Parmly, judiciously observes, "when the teeth are kept literally clean, no disease will ever be perceptible; their structure will equally stand the summer's heat and the winter's cold, the changes of climate, the variations of diet, and even diseases to which the other parts of the body may be subject from constitutional causes."

Slow decay can easily be arrested in its progress, when taken in time. In the first place, often entirely with the file; and when a cavity has already formed, by plugging it properly with gold, will secure the tooth for lifetime.

Spongy, or white caries, wants often a different treatment, on account of the soreness it produces in the bone by inflammation; it is of such a nature, that when we do not dry out the cavity, and remove every particle of the disease, it will decay under the plugging; and the moisture, which is sweated out of the pores of the tooth, will often force the plugging out of it, by taking parts of the enamel along. Many cases have come under my notice, of teeth affected with this caries, that had been treated by our most eminent dentists, here and elsewhere, which had decayed again, as I have stated above, in spite of all their skilful operations. It seems as if nature were often determined to destroy to the end; and we have such teeth so often to treat, where a great deal of the bony substance is destroyed, and only a thin and brittle enamel remaining.

In spongy and white caries, I have adopted the following method of treatment:—

To prevent the pain caused in excavating the cavity, I use a

strong solution of benzoin and tanin, with which I saturate some cotton, and let it dry again for use, in order to evaporate the alcohol, (as I consider all spirituous liquors increase inflammation.) This cotton will act in many cases as a temporary plug; it adheres tightly to the bone, expels all moisture, takes out the inflammation and all the pain, and facilitates the operation. When two or three times repeated, the cavity can be thoroughly cleansed and plugged without pain; and never discolours the tooth.

In obstinate cases, a little arsenious acid may be used under this cotton plug; but care must be taken not to use too much; for, in some irritable cases, it will produce violent inflammation, so as to destroy the tooth, particularly where the pores of the tooth are large. Several cases of this kind have come to my notice. A young lady of delicate constitution, applied to a dentist here, to have a second incisor plugged; the tooth was very sensitive; but it was not much decayed, a little arsenious acid was introduced, which produced in the evening a violent inflammation; the family physician was called, who ordered four leeches on the gum. The next morning the young lady called on me; I told her it was not the operator's fault; it was owing to the nature of her tooth, and it would have been a great gratification to her dentist, if she would have called when it commenced aching; and it would yet be of some service to let him see it; but she would not do so, and wished me to attend to her. The tooth was quite red from the severe inflammation.

I opened into the nerve cavity, and found that the nerve was dead. I punctured and took it out, and after all the irritation had subsided, in about a week I plugged the tooth with gold. The tooth recovered, in a slight degree, its natural color; but is still of a greyish tint.

Another case I treated, was a young lady of about twenty-one years, who called upon me to plug a lateral incisor. The tooth was very sensitive, and I therefore placed in it a very small piece of cotton, prepared with arsenious acid, and directed her to call the next day, or sooner, if the tooth became painful. In about four hours she returned, complaining that she suffered exceedingly from a heating pain. I took the cotton out, and washed the cavity clean with some sugar of lead water I had been using a minute before to syringe an abscess, and this so cooled and eased the tooth, that I was enabled to excavate a good deal of the caries; and after keeping it well covered for several days with the cotton, prepared as I have before related, the tooth was plugged with facility; it was not at all discolored, and is yet healthy, and has continued so since last August.

Thus we see what benefit would be derived, if the patient would strictly follow the advice of the dentist, and call on him as soon as such accidents occur.

I could mention numerous cases, showing the complete success



I have had in the treatment, from the use of this solution of benzoic acid and tanin, which I have employed even in cases where the nerve was nearly exposed.

I am convinced, that those who try it, will find it a good article. It dries out the cavity thoroughly, and decay will not progress when it is placed tightly in the cavity, as it keeps the tooth dry, and can be worn as a temporary plug for several months.

I now conclude this essay, with the sincere hope, that the members of this society, will bring something forward from the stores of their experience, to attract the attention of the Association, and generously impart some of the knowledge they have acquired, for the benefit of their fellow-members.

F. A. REINSTEIN.

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For the Dental News Letter.

## A SYSTEM FOR RECORDING DENTAL OPERATIONS BY INDICATORS.

By F. L. CRANE, D. D. S., Easton, Pa.

To be able to turn to a record of operations previously performed, has frequently and for various reasons, been to me a source of much gratification. A system for the keeping of dental accounts, by which such a record is made with facility and accuracy, is at least desirable. I therefore beg leave to submit the following sketch of a system to my brother Dentists, that it may be compared with others, and perhaps help to bring out a more perfect one. As the indicators cannot be presented to the eye in this article, they must be supplied with pen or pencil during its perusal.

In order to understand the following details the more practically, take a blank leaf of a day-book and rule three spaces, each a quarter of an inch wide, parallel with, and closely to the left of those which are ruled for the reception of cash amounts. The first, or left hand space, is for the reception of the division indicators; the second, for the class; and the third, for the surface of the tooth operated upon.

The thirty-two teeth are considered in four divisions, of eight teeth in each; the median line being the line of division, called the upper right, upper left, lower right, and lower left divisions. To indicate in which of these divisions the particular tooth operated upon is situated, a short perpendicular line is made in the first or division space, with a short horizontal line at the top and right of the same for the upper right division; top and left for the upper left; bottom and right for the lower right; and bottom and left for the lower left divisions. A small right-angled figure.

The teeth, for the sake of convenience, are reckoned in eight classes, of four teeth in each class. One letter placed in the

second space, and following the angular figure, will indicate the particular tooth in the division you wish to record: thus, *f* stands for front incisor; *l* for lateral incisor; *c*, cuspidatus; *b*, first bicuspid; *d*, second bicuspid; *m*, first molar; *o*, second molar; *r*, third molar.

To show the surface operated upon, one letter also follows, placed in the third space. Thus, *m* in this space stands for mesial surface (anterior surface of the molars and bicuspid); *a*, anti-mesial surface (posterior surface of the molars and bicuspid, and right lateral surfaces of the incisors of the right divisions, and left lateral surfaces of the incisors of the left divisions); *e*, external surface (labial); *i*, internal (lingual) surface; *g*, grinding surface.

These names for the surfaces, it is believed, will be found more convenient and definite than any others; *anterior* and *posterior* are not sufficiently definite for *all* of the teeth, being situated in the form of an arch; and *labial* and *lingual* have the same initials. These three sets of indicators,—for the divisions, classes and surfaces—in their proper connection, are convenient to use in writing out the details of any particular case in which it is desired to point out a given tooth or surface, as they save time and space.

The signs to indicate the operation performed are placed upon the left line, immediately preceding the division sign, which line should be ruled double. A small dot or period, placed upon this line, stands for the word filled; two dots, re-filled; and a short dash across the line, shows that the given surface has been filed and polished without being filled. The sign for filling may be varied to any required extent to show the position of a filling upon a given surface; thus, for a posterior depression upon a grinding surface, use a common check mark, carrying the pen to the right, at an angle of forty-five degrees, and for an anterior depression use a similar mark, except that the tail is carried to the left. A comma indicates a filling near the external surface, and the same character inverted records a filling near the internal or lingual surface. These latter signs are principally used for the grinding surfaces when the filling is not central.

More than half of these indicators may be dispensed with in recording a series of operations in the same mouth, and often one only is necessary after the first operation is on record, which it will be perceived requires four indicators; for as each operation is recorded beneath the preceding, it is unnecessary to repeat the sign for filling until a different symbol is required; nor need the division indicator be repeated as long as you are recording operations in that particular division; or if the division be changed for another, and the class or surface the same, it is not necessary to repeat their indicators, or place one letter or symbol immediately beneath another similar one. The propriety of this will be quickly perceived by trying a few examples upon paper.

I think it well to carry out the price received or charged, on



the line with its record for each operation, filing, &c.; as well as for filling. I know some who charge little or nothing for filing, whereas it is an operation in which their reputation is as much concerned as, perhaps, any other; and I would ask, whether it is not reasonable and fair that they should receive at least half as much for preserving a tooth by filing and polishing as they would have asked for filling the same with gold? A sufficient alphabet should be bound in the Case Book, in which to enter every patient's name, whether the operations be paid for or not; if paid they should be so marked in plain letters, if not, they stand charged. The record will leave a blank space upon the page for remarks. I think it best to give the book-binder directions to rule each page of the Case Book for two headings, and put but two names upon a page; those being at the top. For making remarks in the Case Book, it is convenient to make use of short-hand or Phonography. To such as may not have paid attention to this elegant style of reporting, I will state that the "Complete Phonographic Class Book, containing an inductive exposition of Phonography," may be obtained, by mail, of John F. Trow, 49 and 51 Ann street, New York. Price, 37½ cts.

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For the Dental News Letter.

MESSRS. JONES, WHITE AND McCURDY:

*Gentlemen*,—Having read with much pleasure and profit, the last as well as many other numbers of your News Letter, permit me to trouble you with a few lines, as a commencement of my quota, towards sustaining so useful a little work. For many years past I have given much attention to the soldering of whole sets of teeth, and rarely, if ever, experienced any difficulty as regards springing the plates; particularly, since I have used your excellent gold plate No. 28, which for toughness and uniformity, deserves the highest praise. I believe my success depends in a great measure on the attention given to the arrangement of the linings, the quantity of solder used, and the care taken not to allow it to connect the linings together, and thereby form a contractile band round the plate, which on cooling must inevitably warp the piece; again, the sand used must be very clean and well sifted, to remove all foreign matter, which, when heated, might expand and crack the mass, which, however, it may be better to bind or confine, and carefully trim of an equal thickness around the plate and teeth, to render the expansion and contraction as uniform as possible. By observing the above rules, I am under the impression, that neither will the plaster crack, nor the plate warp, nor will there be any occasion for the re-swedging the plate with the teeth on; a dangerous operation, to say the least of it, and one seldom tried by me without accident to the teeth, from the jar of the hammer.

Yours, &c.,

R. G. HOLMES.

Brooklyn, Nov. 1849.

For the Dental News Letter.

REPORT OF PROCEEDINGS OF THE PENNSYLVANIA  
SOCIETY OF DENTAL SURGEONS.

A stated meeting of the society was held December 4th, 1849, at the usual place. Mr. C. C. Williams, President, in the chair. A. R. Johnson, Secretary. After the usual preliminary business, Mr. J. McQuillan was elected to membership.

An essay from Dr. Jas. Fleming, was read by the Secretary; after which, on motion of Mr. S. S. White, a vote of thanks was returned to Dr. Fleming; also, that a copy be furnished the proprietors of the "News Letter" for publication.

A communication from Mr. F. Reinstein, was now read; the subject—caries.\* In some prefatory remarks, he says, "On establishing the society, it was forcibly impressed upon our minds, that social intercourse, and the imparting to each other the knowledge obtained in the daily practice of our profession, would add greatly to the advancement of each individual member in the dental art.

"It is highly necessary that we awake to the importance of improvement, and, that in future, every one of us, to push on the good work, ought to bring, in turn, something before the society, no matter how small, in which our own views or practice is given.

"Our art opens for us a wide field of observation, on which to write or speak, and those who have, by experience, a better view of the case related to them, should meet the other with kindness, to show him his error, if any. The most timid, would in this way gain confidence, and be encouraged to collect and arrange his ideas on the subject which he may wish to bring before the Society.

"By these means, the great object of our Society will be accomplished, and ourselves bound more closely by the ties of fellowship."

Oral communications being now in order, Dr. J. D. White made a few remarks on amalgams, condemning their use, on account of the mercury they contain, and their contraction in hardening, etc.; giving it as his opinion, that it was not necessary that there should be oxydation of the metals to be detrimental to the teeth.

On motion, the Librarian was authorized to subscribe for the "Dental Register of the West."

Messrs. Jas. Parry and A. R. Johnson, were appointed to deliver essays at next meeting. After the transaction of some important business—Adjourned.

\* Selections from which will be found in this number of the News Letter.



## OBSERVATIONS UPON THE LUXATION OF THE JAW, AND A NEW METHOD OF REDUCING IT.

BY M. NELATON.

Translated from the French by THOS W EVANS, Dentist, for the Dental News Letter.

“When I published, in 1847, for my “*Eléments de Pathologie Chirurgicale*,” the article upon the luxation of the under jaw, I was not long in perceiving that the doctrine upon that point, pathology, was not founded upon sufficient proof. I was struck, particularly, by the remark of Monsieur Malgaigne, to wit: That all the classical authors of the present day, had written as if luxation was a physiological position of the under jaw, that could be produced voluntarily and without pain, and that supposed displacement has not a tendency to continue as in the true luxations.

Although at that time I had not had the occasion of observing that affection, I did not hesitate to pronounce against the received ideas; I have since searched, by making experiments upon the dead subjects, to re-establish an old theory quite abandoned,\* a theory, according to which, the continuance of the displacement would find its cause in the contact which takes place between the summit of the coronoide apophyse of the lower jaw and cheek bone.†

One can easily imagine how much I wished to be enabled to observe that luxation, in order to study it from the new point of view which I had taken of it, and also to verify my theory.

The first case presented itself to me at the St. Antoine Hospital, but as I was searching to assure myself of the exact position of the coronoide apophyse, and of its relation to the cheek bone, whether the simple pressure of my fingers introduced into the mouth would have been sufficient to disengage it, or by any other means. Before having been able to proceed to my examination, I felt the jaw slide from under my fingers, and contract, as it were, by itself—certainly much against my will. But in a month after, another occasion presented itself, and as favorable a one as I could have desired.

*Obs. 1.* A woman had luxated her jaw on both sides in gaping, about eleven o'clock in the evening. An eminent physician, M. Beaugrand, was called immediately, and made several unsuccessful attempts at reduction. They then called in another physician, M. Poultier, who having had several opportunities of reducing luxations of the same kind by the ordinary method, and did not doubt but what he should succeed as well as in previous cases, but he was as unsuccessful as M. Beaugrand. M. Manget was called in his turn, and made new attempts of various kinds; and

\* See “Dissertation, in letter form, upon book of the diseases of the bones;” Paris, 1726; without author’s name, but generally attributed to Humauld.

† See the exposition of this theory “*Review Medico-chir.*,” v. i. p 226.

finally at two o'clock in the morning, they abandoned the patient, without having succeeded in reducing the luxation.

The next morning, the three physicians met again. In order to diminish the muscular contraction, they employed successively, bleeding, baths, inhalations of chloroform; all their efforts still remained ineffectual. M. Lemaitre-Floian was called in after them; he continued the same course of treatment, without success. At last, the next day, I was called.

The patient was suffering very much, she had passed a dreadful night, as one may imagine; the repeated pressure had caused excoriations in the mouth, and swelling in the cheeks, and also in tempora-maxillaires and under maxillaires regions. Here are the phenomena of the luxation.

The mouth was partly open, the upper incisors were separated about three-quarters of an inch from the lower, and they also were carried forward about half an inch. Things very remarkable, the patient could still increase, voluntarily, the space between the jaws; but she could not bring them nearer together. The condyles had quitted their ordinary places, but were forced against the root of the zygomatic apophyse.

The patient was seated in a rather low chair. I examined by the mouth, the coronoide apophyse, of which I was enabled to feel the summit; the summit was propped against the lower angle of the cheek bone, and on the outside of the tubercle, which results from the articulation of that bone with the superior maxillary.

All these things well observed, I proceeded to the reduction; in order to do that, I requested the patient to open the mouth as wide as she could, and while she was executing this movement, I placed my two fingers upon the coronoides apophyse, and without even embracing the under jaw, and without taking any other point of support, a simple pressure backwards caused the condyles to return at once in their cavities; the reduction was complete, and all the symptoms disappeared.

I write in my "*Eléments de Pathologie Chirurgicale*," after having described the old methods, "It is very probable that one might succeed equally well in reducing, by forcing the coronoide apophyse directly backwards with the thumbs placed either in the interior of the mouth or upon the exterior, immediately under the cheek bone, and by taking a point of support with the other fingers upon the mastoïdiennes regions."

Now, what theory only, had caused me to presume, was surpassed by the reality; and the new method having proven itself, upon the first trial, to be not only equal, but superior to the old method, adopted by the most skilful physicians. I have not had occasion ever to take a point of support backwards, although that resource may be sometimes very useful, the slightest pressure sufficed.



## TREATMENT OF DENTAL PULP PREPARATORY TO PLUGGING.—*Continued.*

BY J. D. WHITE, M. D., DENTIST.

*Of False Toothache.*—Acute sensibility, by striking against the crown of the tooth with an instrument, especially upon the face, and in cases of teeth that have more than one root, striking upon the cusps opposite, and in the direction of the roots separately, will lead to a correct diagnosis, which is inflamed, or which is acutely affected. This precaution should never be omitted, as it is often that only one root of two or more is diseased. A seeming elongation of the tooth from the socket, and more yielding motion than in healthy teeth in the same mouth; these latter symptoms may be more or less marked, proportionately to the *hyperemia* and thickening of the periosteal membranes, and an absence of pain by passing an instrument into the pulp cavity, together with an insensibility to pain by applying cold to the parts.

*Of Sympathetic Toothache.*—This may happen to teeth which are wholly sound; but often they are found to have undergone some morbid change, such as recession of the gum from the neck of the tooth, or irritation of the external membranes, excited by salivary calculi, slight decay of the dentine, erosion, or defective in some way or other. On account of the fact, that pain is so frequently experienced in very sound teeth, and in remote parts, such as in the temples, top of the head, ears, and even the shoulders, it would be unpardonable in an operator to extract an aching tooth, until he had formed his diagnosis from the most positive signs, that the pulp was really exposed, or it was the actual seat of the disease. Upon this point, we have occasion daily to exercise the greatest precaution. I will be pardoned for digressing to relate, at this point, a very remarkable case. Master T., of Chester County, aged fourteen years, was brought to me two years ago, from school, suffering very much at times, and especially at night, with pain in the temples, and in both of the superior front incisors, which were partially decayed, but not more than half way from the surface of the enamel to the pulp cavities. I was requested to destroy the nerves and plug them, or extract; any thing to get rid of the pain. Upon examination of the mouth generally, I discovered that the nerves were exposed in both of the first inferior molars. I directed their extraction, which was acceded to, although they had never been the site of pain, nor had they been suspicioned as being in any way connected with the patient's suffering. The front teeth were plugged without any trouble, and there has not been any of the former symptoms experienced since.

*Treatment of the Dental Pulp.*—The treatment of the exposed pulp has given rise to great difference of sentiment among well-educated dentists; but mainly about the *means* which should be employed for that purpose, agreeing, pretty generally,

that it is bad practice to destroy it entirely. But as well might we expect to procure a healthy function of the *rete-mucosum*, when denuded of the *epidermis*, by substituting one of our own invention, as to procure a healthy function of the pulp, when deprived of its natural protection—the bone. The various modes of treatment, which have for their object the preservation of the pulp, must be of that order. When the pulp becomes exposed by decay, or any other cause, the delicate vessels which ramify upon its surface, are soon ruptured, as well as those which passed into the bone which have been destroyed; they pour out blood and serum, which must have exit through an external opening, or inflammation supervenes, and in a short time establishes a suppurating surface. Any attempt to remove this pathological condition permanently, by medical or mechanical agents, must of necessity prove ineffectual. Notwithstanding, this seems to be the language of reason and experience, it is the object sought to be obtained by most practitioners in Dental Surgery. I would consider this to be an invariable truth, that *so long as the artery continues to convey blood to the pulp, so long will there exist the necessity for an external opening, effusive, or suppurating surface*, unless the inflammation becomes so violent as to produce a slough of the whole pulp.\*

*By Astringents and Capping.*—This is a mode of treatment much extolled by some dentists. Dr. Fitch remarks, “I think the best practice will be, and is, to unite both, as I am in the habit of doing, which is, use the astringents for some time, and then cover the nerve with a cap of lead or gold plate, and complete the filling of the cavity with gold. If this practice be adopted by the dentist, he will often save the tooth.” Yet he frankly admits, that, “in many cases it entirely fails.” Now, if the cap could not save the tooth before the astringents were applied to the pulp, how could it do so afterwards? The therapist teaches, that the effect of an agent that does not destroy the vitality of a part to which it is applied, is of very short duration. Astringents do not in these cases destroy the vitality of the pulp; then, of course, it may return in a very short time to the same condition in which it was found, before the astringents were used, (nor would the cap be necessary to protect it from pressure,) and give rise to all those dreaded evils which would have followed the application of the cap in the first instance. Professor Harris, of Baltimore, with his usual candor, in speaking of the above method of treatment, says, “It is not recommended as infallible; and while I declare, it has been more successful than any other that I have tried, candor compels me to add, that it has failed in more instances than it has succeeded.”

\* I would refer the reader for a more full discussion of the physiological and pathological considerations of the teeth, to an address delivered by the writer, and published in “Stockton's Dental Intelligencer,” vol. 2, No. 9, July 1st, 1846.



This is about the success with which the writer has met, in adopting the above plan of treatment, *or any other method which has for its object the preservation of the vitality of the pulp*. I think I hazard nothing in asserting, that, as great a number may be saved without any preparatory treatment whatever, if the pulp be not actually pressed upon by the stopping, as by the above described plan.

*By Cauterization.*—This is a method which has been highly recommended, as a means of destroying the pulp, by some writers, (*Kæcker* and *Maury*,) the last cited author, observes, “We have pursued this plan for fifteen years with uniform success.” I believe the reason why Mr. Maury met with so much success is, that in the use of the cautery, in any form, the vitality of the pulp is destroyed, and most generally removed more or less from the tooth, especially when the hot wire is used. Sometimes the cold wire is thrust down the roots of the tooth so far as to be stopped by the diminished size of the canal, and with a rotary motion the blood vessels and nerves are crushed off between the hard instrument and the walls of the canal; and in this way it is, also, removed far down in the root. The more there is removed of the pulp the better; for if only the minute extremity of the artery be left, it will contract and retract with more energy than if it were divided into numerous small branches; it is, also, distributed extensively over and through the pulp, and forms one of its principal constituents. When the pulp is exposed by removing the decay, and no matter how carefully, blood and lymph will ooze out immediately, and continue for an indefinite length of time, defying the permanent effects of astringents; but if it be removed as far down in the roots as a small instrument can well be passed, the bleeding will cease in a few minutes, or hours at the farthest, and it is not of much importance in a pathological point of view, whether this be done by thrusting into the roots a hot or a cold instrument; the pulp is destroyed in either instance, and this is the principal indication to be met in the treatment. We can, and justly too, compare the exposed pulp to a small and extremely vascular tumor, the mere puncture of which would establish an irrepressible hemorrhage; but cut away the whole mass, and one single act of *torsion* upon the main trunk would immediately arrest it. From my experience, the *actual* cautery is the best means of destroying the pulp, where it can be properly applied, as in cases of the roots of the front teeth, where it needs but one or two applications to remove the whole pulp; and I can affirm, with Mr. Maury, that I always succeed in my treatment of a tooth, where I can apply it properly; but I seldom use it now, except in front roots, preparatory to setting teeth on pivots; and the gum does not swell after the operation, as is common, when this method of supplying teeth is resorted to. Inflammation does not often follow the proper application of the

actual cautery, if it is not too large, and applied too often ; but if it comes in contact with the walls of the internal cavity, and be retained there for an instant, it will exalt the temperature of the root so much as to inflame the alveolo-dental membranes, (and of course, abscess *may* be the result,) it therefore requires great care in its application. Some merely "*touch lightly*" the pulp, so as to produce an *eschar* ; in so doing, the whole pulp in many cases becomes highly inflamed, and causes intense pain, because the eschar or shriveled spot acts to contract the remaining and living part of the pulp, in a similar manner, as if it were grasped with a small pincer, or were pressed upon by a plug ; besides, the deadened part acts as a foreign body, and produces inflammation.

If in such cases, the entire pulp be removed or destroyed, the pain ceases. Mr. Bell, of London, deprecates the use of the actual cautery, as well as all corrosive acids. He says: "The first and speedy effect of their application is to produce extreme inflammation in the membrane, (*he means the dental pulp*), with such intense suffering, as to demand the immediate removal of the tooth." He abandons the use of any agents, therefore, which have a tendency to destroy the vitality of the pulp, as improper ; and recommends a method of treatment by *stimulants*, which I would be pleased to continue in my next.

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For the Dental News Letter.

MR. EDITOR,—A few days since, a patient for whom I was filling teeth, told me, that after he had arrived at the years of manhood, a horse kicked him in the mouth, and knocked out the right upper central incisor. In about one year afterwards, a new tooth of the *same kind* made its appearance, and continued to grow until it was fully developed. I saw the tooth which had been reproduced, and it was a good match, both in color, shape, and size for the corresponding one on the left. I questioned him closely, and satisfied myself that it was a case of perfect *third* dentition.

In your October number, I observed some remarks in regard to the springing of plates in soldering. My method (which is successful) is this:—I use about one half coarse sand with the plaster, and after giving the teeth and plate a coating of the mixture, I sprinkle on *fine iron wire*, cut into pieces about one-half of an inch in length, all over the plaster and sand, and then apply another coating of the plaster, and continue both applications until I get a sufficient quantity to hold the *work* firmly together. To prevent warping *entirely*, the *whole* should be *thoroughly dried* before it is brought under the blow-pipe. *Then* it should be heated equally all over, before an attempt is made to flow the solder.

In my next whole upper set of teeth, I intend to try Dr. Flagg's lateral suction cavities. I think the idea a good one ; but instead



of disturbing the wax impression, I shall mould plaster of Paris on the plaster cast, just where I want it, which I think may be done better in this way, than in removing a part of the wax impression. I would respectfully suggest the idea to Dr. Flagg.

The recommendation of your correspondent, who advises the use of salt water, for the purpose of making plaster harden rapidly, is valuable. It is a fact, and a new idea to myself.

I have never seen "Ambler's Journal of Dental Operations;" but I commenced keeping a *record* about six years since, in the following manner. I will transcribe from *my* journal.

August 2d, 1847, OWEN TAFT, DR.

PAID.	1 gold filling,	\$1 25	Left lateral surface of left upper lateral incisor.
	1 " "	1 50	Median surface of right upper central incisor.
	1 " "	1 50	Left lateral surface of left under lateral incisor.
	Setting tooth on pivot,	2 50	Left under canine.
		<hr/>	
		\$6 75	

I do not, however, write the description in full, but abbreviate, as, for instance, the first line, lft. lat. sur. lft. up. lat. in. *My* object in keeping a record is, to know by reference to the journal, whether I ever performed a certain operation or not, which has failed, and which the individual wishes me to make good, as I warranted the work. This practice of recording, has saved me many dollars, for patients who have had operations performed by different dentists, *sometimes* find themselves mistaken, when they say, that one of my fillings has "come out."

I have written you a rambling sort of a letter, which you may dispose of as you please.

Respectfully yours,

H. S. CHASE, M. D.

Woodstock, Vermont.

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For the Dental News Letter.

MESSRS. JONES, WHITE, & Co.

GENTLEMEN.—In my last communication, I gave the result of my experiments with the amalgam of tin and cadmium up to that date. The result had not been as satisfactory as it seemed to promise in the commencement.

The deep yellow color, I mentioned as having observed in some cases beneath the filling, upon removing it, caused me to fear it would not be durable. Since which time, I have examined some of the early cases in which I employed this filling; some have entirely failed, while others are apparently doing well. In all the cases, the filling upon the surface appears to retain its color. Finding it to differ so much in different cases, I am induced to regard it as at least an uncertain article. I do not feel satisfied to use it, even as an expedient, under such circumstances; having no confidence myself in its durability, I do not even feel justified in recommending its use to the profession.

In regard to its merit, as compared with the various other amalgams, time will be its best test.

My experiments some years ago, with this preparation, were not sufficiently protracted to enable me to discover the phenomenon that I have recently observed; nor were my means of observation so extended, as they have been latterly, from the fact that my experiments were discontinued at that time. I was induced to believe, at a very early stage of my professional career, that all preparations for filling teeth in which mercury entered as a component part, were objectionable, which I believe is the opinion of many of our American dentists; indeed, there has always existed more or less prejudice in the public mind, against mercurial preparations.

It was not until I had been in Europe some time, and had found that the practice of filling teeth with amalgams was so universal, that I was induced to resume my experiments with the preparation. Believing it to be better than those amalgams in general use, I hoped it might prove of some utility to the profession, and also, that humanity at large would be benefitted by it.

Paris, Dec. 11, 1849.

THOS. W. EVANS.

#### REMOVAL OF A TUMOR.

The following was handed us by a gentleman—a dentist—copied from a letter written him by a professional friend, and which we give as an instance of the ignorance of many, and an evidence that sometimes, and not unfrequently, the dentist as well as physician, get great credit for doing wonders, when but a simple operation was performed:—

“Your case of vascular tumor, reminds me of one that I removed from an old lady’s mouth, about three years ago, for which I received more credit than I laid claim to. This was owing to the peculiar nervousness of the patient. She had consulted all the physicians, and would-be physicians, besides all the old women of *both sexes* in the whole neighborhood; and had come to the conclusion, from all she could learn, that it would be “life or death” to attempt its removal. When she called on me, I found a very formidable looking tumor, occupying the position of the left cuspidatus, and projecting out the mouth. It was about the size of a hulled walnut, and of a purplish hue, very sensitive to the touch, and bleeding freely from the least scratch. It had been called all kinds of hard names, from *cancer*, *noli-me-tangere*, *fungus hæmatodes*, &c., &c., down to names not found in the books.

Before I removed it, *she made her will*, deliberately, I was told afterwards, expecting to die under the operation! I removed it with a ligature, for fear of hemorrhage, and afterwards applied the nitrate of silver. I also removed a portion of the fang, which had been left in, in an attempt at extraction, a good many years previously. The parts healed perfectly.



# THE DENTAL NEWS LETTER.

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JANUARY, 1850.

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We feel somewhat gratified at the appearance of this number, and we flatter ourselves that our numerous readers will be pleased also.

We have here, a further discussion on the Warping of Plates, which, from the interest manifested, must soon be a settled matter. Also, an address, which broaches the subject of a Dental College in Philadelphia, (of this, we may say something hereafter,) besides containing some good thoughts on Dental Associations; their usefulness, both to the profession and public—also, an article on a new system of keeping dental records—a continuation of papers on the interesting subject of the Treatment of the Dental Pulp, which increases in interest—a translation from the French, on the Luxation of the Jaw, to the translator of which, we return our thanks, and trust we shall hear from him statedly.

Without particularizing further, we can commend all to the reader, in the full assurance, that they will abundantly repay perusal.

As will be seen, nearly the whole number is original, which flatters the hope, that we shall eventually be able to increase the number of pages of our quarterly.

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The following was designed to accompany Dr. A. C. Castle's communication on "Springing of Plates," published in this number; but came too late, as the first form had gone to press before it was received. We therefore add it here.—ED.

It is one of the vexations in the practice of the dentist, to hear complaints, after having completed a piece of dental mechanism, and placed it in the mouth of the patient, of its metallic or "coppery" taste, which leads to the supposition, that the gold used is of an inferior quality; to obviate this metallic taste to the mechanical denture used, all that is necessary is to boil it in West India sugar and water, for a few minutes; when the sulphate of copper deposited between the teeth and their gold linings, will be entirely removed.

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*New Agents.*—We add to our list of agents the following:—

HAINES & DIETRICH, Druggists, Dayton, Ohio.

J. C. RICHARDS, Druggist, Chambersburg, Pa.

We copy the following editorial remarks from the Dental Recorder, of December, 1849.

*"Premium Teeth."*—We perceive that the premium offered by the Mississippi Valley Association of Dental Surgeons, and announced some time since in the Recorder, has been awarded to Messrs. Jones, White & McCurdy, for the best mineral teeth, one hundred in number.

"These teeth have now been in the market several years, and are so well known and appreciated by dentists, that they need no recommendation from us. These manufacturers have made several improvements in the forms of the various classes of teeth, and manifest a desire to supply all the various shades, patterns, and styles which are needed to match the natural ones."

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As some errors occurred in the article on the "Treatment of the Dental Pulp," published in previous number of the "News Letter," we make the corrections here, that our readers may notice it.

On page second, for "Jourdain," read "Goodsir;" page third, fourteenth line from top, for "alveolar," read "alveolo;" same page, fifteenth line from top, for "membrane," read "membranes;" same page, ninth line from bottom, for "large," read "loose." There are also two sentences italicised, which should not be.

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We have just received a communication from Dr. R. G. Holmes, of Havana, Cuba; but too late for publication.

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*Spencer's New Dental Drill.*—We would call attention to the advertisement of this article on last page of cover.

From the numerous testimonials there given, we should suppose it to be quite as useful as it is ingenious.

We will be happy to supply all orders.

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*New Grinding Apparatus.*—On another page will be found an article copied from the Am. Jour. and Lib. Dent. Science, in reference to Dr. Pratt's "*New Dentists' Lathe*," and can add our testimony to its beauty, usefulness and convenience.

We have just received a supply, which we can sell at the manufacturer's prices.

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*Trunk Chairs.*—We have received some of these chairs from the manufacturer, which, for compactness, have never been equalled. To the traveling dentist, they would be invaluable, as they combine utility with convenience.



*Ashmead & Hurlburts' Gold Foil.*—We are agents for the sale of this Foil, and are ready to supply all orders.

*Palladium.*—We are prepared now to supply orders for this article; having received a lot of the best quality.

### A NEW DENTISTS' LATHE.

We have used the lathe described in the following communication, and find it to work well; indeed, we think it superior to any we have ever seen.—*Balt. Ed.*

DR. HARRIS:

*Dear Sir:*—In compliance with your request, I send a brief description of the lathe which you received a few days since—though, without a drawing and figures of reference, scarcely any idea can be conveyed of its form and appearance. The arbor upon which the grinding-stones are mounted, has firmly placed upon it a heavy fly-wheel, revolving between two columns, so constructed that any wearing of the centre or boxes may immediately be remedied by starting the set-screws attached to each. To one column is appended the crank and driving wheel, which, together with its pinion, is made with diagonal leaves, (technically, spiral-gearing,) giving three revolutions of the fly-wheel to one of the crank, and producing a sufficiently swift, strong and steady motion for any purpose to which such a machine can be applied in our profession.

The base from which the columns spring, is made hollow beneath, for the reception of slips of thick woollen cloth or gum-elastic, previously to securing it upon the table, for the purpose of breaking the vibration of sound, rendering the machine much stiller in motion than it would otherwise be. The rest for the hand is attached to the base, turning upon a centre, and held in position by a binding-screw, nearer or farther from the running arbor, as the nature of the work may require.

Its advantages over a common lathe are—that while its compactness and beauty render it a perfectly appropriate article for the operating room, it will do all, in the mechanical department, which can be done by an ordinary lathe—occupying only a few square inches of space.

Having used it, both in my office and laboratory, I can speak confidently of the amount of work which it will perform. I have taken measures for its registration at Washington, and shall soon be able to furnish them to the profession, of three grades of finish—the running parts substantially the same in all.

I am, respectfully, your ob't servant,

M. PRATT.

# THE DENTAL NEWS LETTER.

Vol. III.

APRIL, 1850.

No. 3.

For the Dental News Letter.

## TUMORS,—SPRINGING OF PLATES.

MESSRS. JONES, WHITE & Co.

*Gentlemen*, If you think the following, showing the importance, when practicable, of removing the causes of tumors in the mouth, in operating for them, is worthy of a place in the News Letter, you may insert it.

About five years ago I was informed, by a medical friend in this vicinity, that there was a negro woman in his neighborhood who was troubled with a tumor in the mouth; and that it had been excised by physicians four times, but was reproduced soon after each operation. After hearing his description of the case, I told him there could be no doubt as to the tumor being caused by a diseased fang of a tooth, and that if it was perfectly removed a permanent cure would be the result. At my request, the woman was sent to my friend's residence. I found the tumor upwards of half an inch in diameter, and occupying the place of the right superior incisors that were lost. Making free incisions, I removed it with the alveolar process around and beneath it, and discovered its cause in about half of the fang of the lateral incisor. There was considerable hemorrhage, which we suppressed by applications of muriated tincture of iron. The operation was quite painful, and the patient declared she would never have it performed again, adding that she might as well die of the tumor as be killed by removing it. The parts soon assumed a healthy condition, and continued so during six months, at the expiration of which time she was removed from the State, and I have not heard from her since.

I will add a line in reference to the springing of plates while soldering. Having occasion to construct two full sets of teeth recently, I adopted the plan proposed by Dr. Castle in the last No. of the News Letter, to prevent the plates from springing. The upper plate of one of them was sprung badly, by the unequal contraction of the plaster, caused by want of proper attention in heating it in a ladle before a common fire. The other, with more care bestowed in its heatings sprung very little, less than I have ever seen in a plate for a full upper set, and not so much as to give me any trouble, and was retained in place by atmospheric pressure as firmly as could be desired.

A. BERRY, D. D. S.



For the Dental News Letter.

## CLEFT PALATE AND ITS TREATMENT,

*And Observations on Artificial Obturators and Palates.*

MESSRS. JONES, WHITE &amp; Co.

*Gentlemen*—I noticed in a former number of your excellent Letter, a request that those who felt disposed to communicate any thing of interest to the profession, should do so by forwarding the same to the Letter for publication. I therefore submit the following to your consideration, and if you deem it of sufficient interest to the profession, you are at liberty to give it an insertion. My object in this communication is not so much instruction, as a brief relation of facts, and reference to one or two cases, wherein uninterrupted cleft palate was involved, and my manner of procedure in the treatment of such cases.

If, perchance, I may throw out any hint that will be of service to any, in the treatment of like cases, or serve to call out an expression of opinion from my professional brethren, I shall be amply rewarded for any trouble I may have been to.

I deem it quite unnecessary here to enter into a detailed account of the origin, history and progress of operations of this kind. I therefore enter at once upon a reference to case 1st.

Mr. R. applied to me for an insertion of a complicated artificial palate, in the summer of 1849. Upon an examination of the mouth, it presented a congenital uninterrupted fissure, commencing with the velum or soft palate, extending through the entire roof of the mouth, inclining to the left of the septim nasi, penetrating through the alveolar arch dividing it between the left central and left lateral incisors.

The lip was also involved, which had been previously operated upon in the usual manner. The central incisor being very defective, and also turned around, presenting its lateral surface anteriorly, and otherwise disfiguring the person, it was thought best to remove it, but before doing so, it was determined to effect, if possible, a union of the alveolar arch, (it being very desirable, in order to procure a basis for the teeth that were to be inserted, viz. left central and lateral incisors,) which was done in the following manner: 1st. The edges of the cleft, on either side, were pared away sufficient to render them quite raw. 2d. An incision was made quite through each edge of the cleft, thus severing a loop of gum on either side, which only remained to be brought together at a point contiguous to the teeth and stitched, taking care not to tear the gum loose at either end of the loop. This done the patient was supplied with a weak solution of nitrate of silver, and a camel's hair pencil, with which he was desired to apply the solution occasionally to the parts operated upon, and the patient was then discharged and desired to return in three days.

3d day. Upon examination, I found the part very much swollen and inflamed, all of which I had anticipated and deemed highly necessary to a successful termination. Adhesion had appeared to have taken place, and nature rapidly finishing up the work. The stitch or ligature was removed, and the patient was discharged for the space of six weeks, with a view of the more permanent union and health of the gum, before the removal of the tooth above mentioned. At the expiration of which time, the tooth was carefully removed, and the patient was discharged for the space of six months. At the expiration of which time, the patient again applied to have the impression taken. At this time the alveolar process was sufficiently absorbed, and the gum presented a healthy appearance. The left lateral incisor, being a healthy tooth, and also very short and conical-shaped, turning its point inwards towards the right central incisor, it was determined to take an impression over the tooth and gum, and strike up a plate over the whole, being careful to make a socket or depression in the plate sufficiently deep for the point of the tooth, that it might not sustain too much pressure. Thus, very much obviating the pressure directly over the suture or newly-formed gum.

The impression was accordingly taken. After the wax was withdrawn from the mouth and immersed in cold water, that part of the wax that pressed up into the nasal cavity, on the remaining part of the fissure, was pared or cut down so as to give an oval and as natural a shape to the mouth as the nature of the case would admit. The plaster was prepared and a cast gotten up in the usual way. The *modus operandi* of casting and constructing artificial obturators and palates, is so well understood by the profession, I deem it superogatory to describe here.

I intend only to add a few comments relative to the proper construction and application of complicated artificial palates, in order to insure the greatest comfort and convenience to the wearer. Taking it for granted that the gold plate is stamped up, and that it is so formed as not only to cover the fissure in the roof of the mouth, but that it is extended forward over the alveolar arch to receive the teeth, which are to be teeth with artificial gums, the reason of which will appear obvious. This done, it only remains to attach the teeth and clasps; these last mentioned should be so applied as to prevent them from pressing up against the gum during the process of mastication. To secure this, it will only be necessary to make the arms, which extend out from the palate, of sufficient width to set up closely to the neck of the teeth immediately anterior and posterior to the clasped tooth. (I prefer the posterior bicuspid to attach to when practicable; as, also, a double clasp or one clasping both sides of the tooth is preferable, as this will prevent the tooth from being drawn from its proper position.) The posterior edge



of the plate should be turned a little down towards the tongue, and its upper palatine edge made thick and rounding, that the velum may be secured from irritation consequent upon its raising and falling motion. Care should be taken that the clasps be so applied, that they offer no impediment to the removal of the mouth piece at pleasure, as it should be removed nightly; and, also, at any time that mucous or any extraneous matter may be found to lodge upon the palate. Thus rendering it useless to attach a loop on the top of the palate to secure a piece of sponge, (as is recommended by some, an unpleasant and useless appendage at best.) The teeth and clasps being attached, it only remains for the palate and plate to be scraped, filed, stoned and polished, and the work is ready for insertion. It would be well to state here, that from the advanced age of the patient, as well as from the great width of the fissure in the velum, the operation of staphyloraphy was thought inexpedient. The patient was very much improved in his physiognomy from the insertion of the artificial gums and teeth. And in mastication, from the ability it afforded in throwing the food about with the tongue without entering the nasal cavity, also, in deglutition, as he was enabled to press his tongue to the roof of the mouth, and to suck his food, a motion so natural in deglutition.

Case 2. This was also a case of uninterrupted cleft palate. The fissure being very narrow, and the edges approximating at the alveolar border; and also free from any upward inclination. It was closed entirely, by means of granulations, through the alveolar arch and hard palate, as far back in the roof of the mouth as the first molars. The means used to induce granulations was the actual cautery.

The manner of closing an aperture in this way, consists in cauterizing the edges of the cleft, rendering them quite raw, with as little loss of substance as possible, which will always produce inflammation sufficient to insure a supply of granulations. The instrument used for this operation, is simply a small steel instrument flattened at the end, and half round on either side, and very smooth, and turned up at a right angle near the end. The instrument should be heated to redness, and drawn along each edge of the opening sufficient to blister freely, but not to sear, as this would be likely to cause a sloughing of the parts, thus rendering the operation futile. It will now only be necessary to repeat the operation every two months until the aperture is closed. The cautery was only applied twice in this case.

To render the mouth entire, it will require only to bring the cleft edges of the velum together, which will be done by performing the operation of staphyloraphy.

Yours truly,  
C. M. KELSEY, *Dentist*.

*Mt. Vernon, O., March 1st, 1850.*

For the Dental News Letter.

## ON THE USE OF THE KEY.

MESSRS. JONES, WHITE &amp; M'CURDY:

In consequence of the prevailing prejudice which seems to exist in relation to the use of the key instrument, for the extraction of teeth, I beg leave to make a few remarks. Indeed it is a common remark made in the Southern States, that all, or nearly all, the distinguished dentists of the Northern Cities have abandoned the use of this instrument, and rely indiscriminately upon the forceps. While I am aware of the injury liable to be inflicted from the purchase and power obtained by the application and use of the key, I, for one, look upon it as one of the most useful and efficient instruments known, if properly managed. About four years since, in consequence of some unfavorable results occurring in my own hands from the use of the key, which I then believed might have been avoided by the use of the forceps, I became converted to the indiscriminate use of the latter. I obtained those of various kinds, anatomically constructed for the removal of the different kinds of teeth. Acknowledging that other practitioners may possess more dexterity and tact in the use of the forceps than I do, I must also confess many more unsuccessful attempts have resulted from the use of the forceps, than did when I made a liberal use of the key instrument. I am thoroughly convinced of there being many teeth, from their peculiar articulation and stage of decay, removeable at once, by the proper application of the key; that may require two, three or perhaps half-a-dozen efforts by any other method. It may be urged, that should a tooth give way under the forceps, the fangs may afterwards be separated and extracted. This I admit, but in many instances it is easier said than done; and to say the least, the operation is prolonged and additional pain inflicted upon the patient, which might have been avoided if the proper method had been resorted to in the first instance. It is well known to be very important to effect an extraction by the first attempt, the second being more dreaded. I presume there are not many operators who have not had some of their patients to exclaim, "If it had only come the first time, I would not have cared for it; but now since it is broken down so low, it will be worse than ever." And frequently we cannot obtain a second effort, and rather than submit to a second trial, the patient prefers risking the roots to remain in the jaw, when several days pain and suffering is the result; and so far as the operator is concerned, adds nothing to his reputation. Nor do I believe the dangers of the key, over that of the forceps, so great as has been alleged; especially regarding the extraction of the superior molars. These teeth are known to have three fangs, the inner fang diverging from the others in a line of some fifteen or twenty degrees, con-



sequently the extremities of the fangs, collectively, occupy a much larger space than the mouth of the alveolus, through which they must pass, if extracted. Fractures of the alveolar border, are of very common occurrence from the extraction of these teeth, and I give it as my humble opinion, that the fracture from the action of the key, is liable to be more limited and less extensive than that of the forceps. If the key is applied, the fulcrum resting upon the inner alveolar plate, limits the fracture to that portion immediately pressed upon by it. By the action of the forceps we have no such protection against the extension of fracture. Dr. Fitch, in his Dental Work, relates a case of extraction by the forceps, in which one of the superior molars, together with the alveolar plate of six adjoining teeth, were brought away. As this occurred in the hands of an awkward and unskilful operator, it is not designed to bring it forward as an argument to prove the danger of the forceps, for a different result, no doubt, would have been effected by a more skilful hand. Yet the occurrence plainly indicates the action exerted upon the alveolar plates by the withdrawal of the fangs of a tooth more extended than the aperture through which they are forced to pass, without support on either side to determine or limit the fracture. The fulcrum of the key, in all probability, would have yielded that support, and confined the fracture to the inner process attached to the same tooth.

While speaking thus of the advantages of the key, I am fully convinced of the fact, that by far the greater number of teeth may and should be extracted with the forceps. Yet I venture to assert that many of those dentists, who have abandoned the use of the key, have had cause to regret it in many instances. I will beg leave here to relate a little instance, for which I hope to be excused. A gentleman, some time since, who wished to have the first inferior right molar extracted, being timid and preferring to be put under the influence of chloroform, rode the distance of twenty-eight miles to a physician in Montgomery, Ala., who had acquired some reputation in the administration of this article. Before using the chloroform, he suggested to the Doctor the propriety of using the key instrument so as "to make sure work," as he did not wish a failure. The Doctor replied, that he never used the key, and that it was pronounced unsurgical and unscientific, throughout the length and breadth of the land—that he would *insure* an extraction with the forceps. Accordingly the chloroform was administered, and the Doctor proceeded, (scientifically of course,) the tooth broke under the forceps, smooth and level with the gum; after which both parties felt willing to stop further proceedings; which resulted in several days' suffering from the roots remaining in the jaw. There is little doubt but the key would have effected the object without any difficulty.

When a tooth is presented for extraction, and the key should be most likely to effect the object by the first attempt, *particularly* if, from the nature of things, we anticipate the permission of one trial only, surely proper discretion and propriety would dictate its use.

Excuse this hasty communication.

Yours truly,

THO. J. WARD.

Wetumpka, Ala., February 26th, 1850.

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Communicated for the Dental News Letter

### OBITUARY.

DIED, in the City of New York, on Monday, March 11th, 1850, of Consumption, at his residence in Union Place, Mr. John Burdell, Dentist, in the 44th year of his age.

Mr. Burdell was born in the town of Camden, Oneida County, N. Y., and came to this city in the year 1828, an entire stranger, but from untiring perseverance and industry, together with a practical sense of morality and virtue, he soon claimed the respect of those with whom he became acquainted. After having acquired the requisite preliminary information, he commenced his professional career as a dentist in 1830. He practiced three years in Broadway, after which he removed to Chambers Street, where he remained about twelve years; and while residing in this street, he gained most of his well-deserved reputation.

During the latter years of Mr. Burdell's life, he paid much attention to religious matters, and he died in the firm belief, that the second advent of Christ was near at hand. He entertained peculiar and extraordinary views on various subjects, yet with all his eccentricities, he was honorable and just in all his transactions.

It was the express wish and desire of the deceased, that a post mortem examination should take place, and a report thereon be made. Fourteen hours after death, Drs. Joel Shew and S. Rogers, in the presence of several scientific persons, proceeded to examine the body. The heart, liver, stomach, pancreas, spleen and intestines, appeared perfectly healthy. There was slight indurations near the pyloric orifice, and a partial congestion of the right kidney; but neither of these deviations were sufficient to cause much disturbance. The right lung was adherent at the summit, and half of its upper portion was one tuberculated mass. Near its centre in front was a cicatrix about the size of a half dollar. The left lung was more diseased than the right, and attached near the entire depth to the wall of the thorax, and, with the exception of about one-tenth of the inferior portion, there were tubercles and cavities to such an extent as to render it entirely unfit for use.

The remains of Mr. John Burdell were conveyed to Greenwood Cemetery, where a suitable monument will be erected to his memory.



## POSTAGE ON PAMPHLETS, &amp;c.

For the benefit of those mailing pamphlets, papers, &c. to their friends on the continent, we publish the following:—

*Paris, December 27th, 1849.*

MESSRS. JONES, WHITE & Co.

Having received many pamphlets and journals from America, coming through England, upon which letter postage was charged, I refused to receive some. Recently one of the Dental Records was charged \$1 75 cents. I did not take it, but called upon the Director General of the French Post Office to learn the cause of this enormous postage. He told me the extra postage was placed upon it in England. I then addressed a note to the Postmaster General at London, desiring an explanation; to which I received the following answer:—

“Sir, in answer to your letter of date—I beg to inform you that pamphlets sent from America through the *United Kingdom* to France, are subject to letter postage.

I am, sir, your obedient servant, KILLEY.”

I therefore would wish all to know, who have pamphlets, &c. to send their friends upon the continent, that they can send them by the way of Havre, at a reasonable rate.

Yours truly, THOS. W. EVANS.

15 Rue de la Paix.

## CHLORIDE OF ZINC.

A correspondent makes the following inquiries, which we trust will be answered by some of our readers who have had experience in the use of the article mentioned.

For the Dental News Letter.

*Gentlemen:*

I wish some one who has had ample experience with it, would give us an article on the use of chloride of zinc, to destroy nerves in teeth. Mr. Tomes gives it a preference to arsenic; but instead of giving his *modus operandi*, refers to *Druitt's Surgery*. The edition of *Druitt*, in my possession, has the following:—

“The chloride of zinc is the most useful of this class of substances.” [Cauterants.] “It was recommended by Mr. James, and has been extensively used by Mr. Tomes in the following manner:—He dilutes it with ten parts of powdered plaster of Paris, and then dips the end of a little roll of softened wax in this powder, and stops it into the tooth.”—Page 395.

Is the admixture of morphia useful in lessening the pain? Is more than one application necessary? How long time is requisite to destroy the nerve? When I destroy nerves to fill teeth, which is seldom, I employ other agents, but I would be pleased to see something on the subject from the pen of some member of the profession well acquainted with its use.

Yours truly,

B.

For the Dental News Letter.

## A NOVEL CASE OF SALIVATION.

MESSRS. JONES, WHITE AND McCURDY:

*Gentlemen*, I am much obliged to you for the receipt of your last number of the "Dental News Letter," and was much interested with the reports of remarkable cases, and other articles contained therein. It is by such efforts to mutually benefit each other, that we are to arrive to a high state of qualification in the Dental Art.

A case has lately come under my observation, which is of interest and novel to me, and I beg leave to present it for your consideration. On the 8th of March, Dr. W., a good practising physician from a neighboring town, called upon me and related the following circumstances, and I will give them in his own words as nearly as I can recollect.

"About three months since, I called upon a dentist to have my teeth cleaned. The dentist was just finishing the cleaning of a lady's teeth, that had been so under the constitutional effects of mercury, as to be severely salivated *monthly*, and all efforts to stop this periodical return of salivation had been ineffectual. The lady was suffering under one of these attacks at this time. When the lady left the dental chair, I took my seat, and the dentist commenced cleaning my teeth *without cleaning his instruments*. In the course of eight or ten days my gums began to swell, were highly inflamed, saliva flowed copiously; my teeth were so loose that it seemed as if I could have taken them all out with my fingers, was quite feverish and had all of the common symptoms of salivation. So severe was the attack, that I was unable to attend to my professional duties for three weeks. Since that time I have had two slight attacks of the same symptoms. I have never taken any calomel myself, nor have I taken any thing else, to my knowledge, that could produce such symptoms."

Had not these statements come from a man whose professional education would enable him to know what he was saying, and his reputation for veracity good, I should not have thought so much of them as I now do. The M. D. was puzzled himself; and when he asked me, "What could have been the cause of my severe salivation?" I could only say, "Don't know, sir." But of the Medical and Dental profession, I wish to make a few inquiries. Could the Doctor have been salivated on the principles of innoculation? The lady that just had her teeth cleaned, was so poisoned with mercury, that she suffered from its constitutional effects monthly, as stated above. Now, could the mercurial virus that collected upon the Dentist's instruments, and without cleaning, have been so introduced into the circulation as to produce salivation? The facts stated in this case furnishes matter for



speculation, and I hope will deduce other facts from the profession, that will throw some light upon this case. One thing, at least, should be learned from it, that dentists should be very careful to *always* thoroughly cleanse their instruments after using them in any person's mouth. I apprehend that there is very little danger of our being too particular and clean in all such operations, and he who would succeed and please his patrons, must keep his office and instruments in a tidy manner.

Yours respectfully,

GEO. H. KEITH, *Surg. Dentist.*

Dover, N. H., March 12, 1850.

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For the Dental News Letter.

*To the Editor of the New York Dental Recorder :*

SIR—In the March issue of your Magazine, under the head of "Enamelled Plates," I notice a communication (anonymous) preceded by an editorial introduction, which, if left unnoticed on my part, would imply a tacit acquiescence to its absurdities.

It becomes, therefore, a duty which I owe to myself, as well as to the professional and unprofessional patrons of my invention, to examine the merits of your correspondent's statement, and to answer the absurdities contained therein, *seriatim*, and I trust that, in common fairness, you will grant space for this communication in your valuable publication.

Your correspondent begins by informing us, that he had given his certificate recommending it, "before he had properly tested it in the mouth." To say the least of this acknowledgment, it conveys but a poor impression of the gentleman's professional conscience; for how could an experienced practitioner *recommend* an article to the world, and to his patients, without first testing the thing properly?

But, with all due deference, I am inclined to doubt the assertion of having a certificate from this source; and this doubt arises solely from the *anonymous* nature of the article. He assumes not even a *nom de guerre*, to be identified, and certainly the certificate which he alludes to could not have been *anonymous*. In the second paragraph he says, "It does not stand," &c. Prof. Chilton's certificate as yet remains uncontradicted by facts, (for anonymous assertions must always go for nothing,) but I am ready to furnish *abundant proofs* that *it does stand the acidity* of the mouth, and is as *tough* and imperishable as an enamel for that purpose can possibly be.

If a plate is *well fitted*, and sufficiently *strong*, it cannot spring. I therefore can only advise *particular attention* to that fact, whenever my enamel is used.

Of the recipe contained in the article in question, I have but a few words to say. It is *not* mine, nor does it in the least resem-

ble mine, but is a prescription, *which, could it be made up at all,* would be most likely to produce the very faults complained of. But I contend that it cannot be made up, and for these simple reasons. The "bone dust" which forms a principal component part of this mysterious concoction, would be utterly destroyed by the intense heat necessary to melt the enamel in its preparation.

Again, the recipe advises us to pour the hot melted ingredients together on a *porcelain slab*. Let us for a moment look at the nature of these ingredients. Three parts are *pulverized flint glass*, and one part is *silex*, and one and an eighth is *bone dust*, the latter of which has, before we arrive at the "pouring out" point, entirely disappeared, and "left not a trace behind," whilst the two former and principal parts assimilate in their nature and qualities so perfectly with the porcelain slab, that no power I am acquainted with could possibly sever the two thus strongly and firmly united. But perhaps the inventor of this remarkable prescription intended to take porcelain slab and all, and make it into impalpable powder; but if so, he should have so stated. One more word about the motive which seems to me to have prompted the article in question. There are such things as *professional jealousies*, hidden under *anonymous* attacks; and it strikes me very forcibly that the recipe given was merely concocted for the purpose of inducing experiments with it which should end, as they *must*, in disappointment. But if my own patent enamel was "good for nothing," what was the object of puzzling the brains of your readers, by giving them a method of making something *acknowledged* to be *worthless*, and that has been abandoned by your correspondent himself; whilst, at the same time, he attempts a slight infringement of my patent, by the assertion that it is "quite *equal* in every respect," and so nearly like mine, that it cannot be distinguished from the patent one.

Your correspondent greatly enlightens the scientific readers of your scientific journal, when he informs them to apply *his* enamel with a piece of *wood*; doubtless he is very desirous of giving a "*cord*" of information.

Like many other new inventions, I do not think that my patent enamel has yet arrived at that high state of perfection which I expect to attain; it is yet susceptible of improvement, and I am still experimenting upon it, in order to make it, in every respect, all that my professional brethren may desire. Whatever new improvements I may make upon it, will, as soon as sufficiently tested, be quickly and cheerfully communicated to my patrons and those to whom I have sold the rights for particular States and localities.

Respectfully, your obedient servant,

M. LEVETT.



For the Dental News Letter.

## OSSEOUS UNION OF THE TEETH.

*Gentlemen of the Pennsylvania Association of Dental Surgeons :*

I present, for your inspection, an instance of the osseous union of the teeth. Though of no practical importance, apart from the certainty, that the effort to extract one, must cause the loss of both; they are interesting from their rare occurrence; and the odium that has been attempted to be cast by some authors upon those who assert the existence of such cases.

Mr. Fox figures three such; Bell mentions four as having occurred in his practice; Maury figures two; and Dr. Harris mentions two in his own practice, and one in that of Dr. McCabe; other writers mention the existence of such cases; while others have confidently denied their occurrence. Mr. Kœcker says, "In all my practice, I have never been able to obtain ocular demonstration of such fact, or to satisfy myself that there had ever been such a case, and this I say also of all my professional brethren with whom I have had an opportunity to converse on the subject." And he adds, "There is no other way of accounting for such doctrine, than by attributing it to a weak credulity or love of the marvellous, or a desire to impose upon the world."

The specimen now before you was extracted from the superior jaw of a boy in his eighth year; the opposite central and lateral being distinct; and, notwithstanding the assertions of Mr. Kœcker and others, affords ocular demonstration of the osseous union of the fang and neck of a temporary central and lateral incisor, and the fusion of the enamel near the cutting edge. The intermediate portions, though in close proximity, are distinct, as is plainly seen by an examination under a magnifier.

It is evident that the rudimentary pulps of these teeth have been primarily distinct, each inclosed in its proper investing sac, as the crowns are perfectly and distinctly formed, and the enamel deposited on all sides; and, though in close contact, no union has taken place, except in one spot, near the cutting edge. At the moment of extraction the interior partition wall was rather longer, extending down to the neck, but of such extreme thinness as to preclude the supposition that it had ever extended lower, and been absorbed during the absorption of the fang.

The pulps, distinct during the ossification of the crowns, have, at the period of their prolongation to form the fangs, been subjected to a process, the direct opposite of that which takes place in the bicuspid and molars. But one alveolus having been formed, the close contact from confinement in one cavity has caused the absorption of the membrane at the point of contact, and the perfect union of the two pulps in one, upon which the ivory has been deposited to form one fang having a single cavity.

My only apology for occupying your attention with a subject

of such little practical importance is, that as it is an occurrence of extreme rarity, there may be some members who never having had "ocular demonstration of the fact," may have been disposed to attribute the reports of such occurrences to a "desire to shield from deserved censure some awkward attempt at extraction."

Respectfully, SAML. JOS. DICKÉY.

April 1, 1850.

For the Dental News Letter.

## TREATMENT OF THE DENTAL PULP PREPARATORY TO PLUGGING—*Continued.*

BY J. D. WHITE, M. D., DENTIST.

STIMULANTS.—"Under favorable circumstances, the sensibility of the membrane may be removed, or its absorption produced, so as to render it capable of receiving the stopping without pain or any subsequent inconvenience. Judging from my own observation, the continual application of a moderate stimulus, such as *alcohol, spirits camphor*, a solution of the nitrate of silver, &c., will be found a more safe, as well as efficacious mode of treatment, than any attempt at destroying the membrane."

He further adds: "It is not, perhaps, easily determined, nor is it of much importance, in what way these applications produce effect; whether by occasioning the actual absorption of that part of the membrane to which they are applied, or by gradually wearing out, as it were, its sensibility; it is sufficient that experience proves them to be efficacious." I think this is a subject on which it is of great importance to know upon what principle a remedy acts. If these applications only wear out the sensibility of the part in which they are in contact, they will often fail upon the same principle as the astringents do; but if they cause the absorption of the whole pulp, they succeed, upon the same principle as that of the cautery properly applied. Exposure to the air and fluids of the mouth for a time, will often produce the same result, namely, "wearing out the sensibility," and absorption of the pulp, or sloughing, without any subsequent inconvenience for a very long period. To prevent the evils which arise from the accumulation of fluids in the pulp cavity, when the functions of the pulp have only been *suspended* for a time by astringents, &c., and the external cavity plugged, some have introduced the practice of penetrating the neck of the tooth with a small drill, where the margin of the gum overlaps the enamel, so that the fluids may have free exit. It is needless to say that this proves the uselessness of the first part of the treatment. Before I discovered that I could destroy the pulp without necessarily rendering the tooth an useless foreign body, and becoming itself a source of irrecoverable irritation, it was my practice to insert a small gold tube in some part of the stopping, believing it to be



preferable to substituting one aperture for another. But this is never required, if the pulp be properly treated; and where alveolar abscess exists, so as to be a serious annoyance to the patient, or injure the parts generally, the tooth should be extracted.

The tubed or drilled tooth is often only of temporary relief, and more frequently goes on to abscess than if it be plugged entirely, I would ask how is it that most teeth and roots that have never been plugged, form abscess when there is every opportunity for the escape of internal fluids? In my humble opinion, and it is in fact my daily experience, that the best plan the operator can adopt to destroy a tooth, is to drill to the nerve cavity, after it has been plugged over the pulp.

**THE CONCENTRATED ACIDS.**—These substances have been highly extolled by some, and deprecated by others. *Arsenious acid* is most commonly employed, and there exists great difference of opinion among dentists in regard to the manner in which it should be used; but I have as yet seen nothing satisfactory, as far as principle is concerned, as to the best mode of administering it. J. J. Greenwood, of New York, employs it thus: "Steep a lock of cotton in essence of peppermint, laudanum or alcohol; then dip a point of the lock in powdered arsenious acid, and apply it in close contact with the pulp."

Dr. Ide, of Ohio, in a communication to the American Journal of Dental Science, gives the following formula, which he has used with great success:

R.—Arsenious Acid, gr. iij.  
Acetate Morphia, gr. ij.  
Misce.

Applied to the pulp on a lock of cotton.

Dr. S. Brown, of New York, in the American Journal of Dental Science, says: "The arsenic should be applied on the extremity of a lock of cotton, steeped in creosote, instead of water. The effect of the creosote is to allay the pain which the arsenic alone would produce when acting on the living nerve." This method of using arsenic is practised by many dentists with whom I am acquainted, and with great success, and less pain to the patient, than is occasioned by it when used alone; but I think the reason assigned by Dr. Brown why it gives less pain when thus combined, is incorrect, and for the following reasons: 1st. The therapist teaches that arsenic destroys the vitality of living tissue, by combining chemically with its constituents. 2dly. The chemist teaches that arsenic is largely dissolved in the essential oils, and sparingly dissolved in water. 3dly. The therapist teaches that if arsenic is not applied to a part in sufficient quantity to destroy vitality speedily, it will be absorbed; and, 4thly. That if it is in a condition to enter into combination rapidly, and in sufficient quantity to produce a speedy slough, it

is not absorbed. Now, creosote dissolves the arsenious acid more freely, perhaps, than any other essential oil; it is, therefore, in a favorable condition to unite speedily and in large quantity with the pulp, and in proportion to the rapidity with which it unites, and destroys vitality, will the pain be diminished. Taking this view of the subject, arsenious acid is, perhaps, the best agent that can be employed for destroying the pulp of a tooth, if it be properly combined with other substances; because it can be applied, in all cases, with equal facility to the back teeth as well as to the front.

A recent writer of this city, (Dr. Goddard,) asserts that "The best plan is to clean out the cavity slightly, and apply to the pulp, as closely as possible, a very small quantity of pure *arsenious acid*. I say pure, because the common arsenic of the shops will not answer; and again, because many dentists are in the habit of mixing it with sulphate of morphia, to diminish pain, than which there cannot be a greater mistake; for the latter article both impedes the escharotic action of the arsenious acid, and increases the pain. The arsenic thus applied, not only destroys the vitality of the pulp, but it combines with the animal matter of the pulp, and forms a compound incapable of putrefaction. (!!!) It causes some pain for three or four hours, when it ceases, and in a day or two the tooth may be plugged." I have tried the above method of using arsenious acid, and sometimes fail to destroy the pulp by one application, but *never* fail to cause great pain. It is well known to dentists, that arsenious acid, when applied alone, will not always destroy the vitality of the nerve, but will give intense pain, and produce acute inflammation, requiring the immediate removal of the tooth; and for the very reason that the arsenic is taken up by the absorbents, and excites inflammation of the whole pulp, without entirely destroying its vitality; and very frequently it is absorbed to such an extent as to produce intense inflammation of the alveolo-dental membranes and alveolar processes. Arsenious acid, applied in *any* form, pure or impure, if it cannot combine in sufficient quantity to produce a speedy slough of the part to which it is applied, will be absorbed, and do great harm, (and this is the reason why its use has been deprecated by the best dentists in this country,) and because it will not always destroy the nerve, but cause intense pain. That pure arsenious acid "combines with the animal matter of the pulp, and forms a compound incapable of putrefaction," will not make it less objectionable than if the pulp be destroyed by any other substance; it will act as a foreign body in the internal cavity, and be a cause of continuing inflammation through the foramen at the end of the root of the tooth, and involve the external membranes. It may combine with any indefinite portion of the pulp; and if we produce the death of a part, it is indispensable to remove such portion, or it will itself



become a cause of inflammation. It is found, by experience, to be so in the treatment of local diseases of other parts of the body, and I think the same facts will apply in the treatment of the pulps of the teeth, no matter what may be the nature of the compound of the dead tissue.

(To be continued.)

For the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

A stated meeting of the Society was held February 5th, 1850. MR. C. C. WILLIAMS in the chair.

Minutes of previous meeting were read and adopted.

The Librarian reported that he had subscribed for the "Dental Register of the West;" also, had received a letter from Dr. C. A. Harris, in answer to his inquiries about Am. Jour. and Lib. Dent. Science; after reading which, on motion of Mr. S. S. White, seconded by Dr. E. Parry,

*Resolved*, That the Librarian be authorized to purchase the Am. Jour. and Lib. Dent. Science from its commencement; also, that he be authorized to purchase a book-case or cabinet, in which the books and specimens belonging to the Society may be properly kept; also, that he be privileged to draw on the Treasurer for the amount of funds requisite for the above purchases.

*Resolved*, That we hold an adjourned meeting on Saturday evening, February 9th, 1850.

On motion of Dr. J. D. White—prefaced by some explanatory remarks—and seconded by Dr. E. Parry,

*Resolved*, That a committee be appointed to prepare a brief history of the origin, progress, and objects of this Society. Committee, Drs. J. D. White, Parry, Williams, Beale and Fleming.

After some discussion, a proposition was offered to amend the By-Laws,—lays over till next stated meeting.

The proposition was to reduce the initiation fee from ten dollars to five dollars. The impression being entertained that many worthy persons would then become members, that had kept back in consequence of the large fee demanded; and further, that the object of the Society was not to make money, but to seek mutual improvement.

Mr. S. L. Mintzer exhibited to the Society an original instrument for removing pivot teeth when firmly set, without drawing on the fang, thereby preventing inflammation; on which the Society expressed a favorable opinion.

Oral communication from Dr. J. D. White, on amalgams, detailing three experiments, which resulted unfavorably. Dr. S. T. Beale had been more successful, but would not recommend a

beginner to use it ; nor should it be used without very great discrimination and caution.

Messrs. S. J. Dickey and Chas. Moore were appointed to deliver essays at next stated meeting.

An adjourned meeting of the Society was held Feb. 9, 1850.

The Examining Committee reported favorably of the following gentlemen, and recommended them for membership, Dr. C. A. Du Bouchet, T. L. Buckingham and M. Depuy.

A very simple but useful contrivance, in the shape of an articulator, from Mr. T. W. Evans, of Paris, was now presented to the association ; which was accepted, and the thanks of the Society tendered him for his donation.

On motion, it was resolved, that a committee be appointed to take into consideration the propriety of establishing a Dental College in Philadelphia ; and if, in their judgment, they shall think favorably of the project, that they shall proceed to draft an application to the Legislature for a charter, and report at next meeting.

This resolution was defended in an able argument by Dr. J. D. White, showing the usefulness of such an institution, and instancing the great amount of bad dentistry now performed, and which, by this means, could be to some extent corrected ; as a diploma would give standing and a guarantee for ability ; because none but those abundantly worthy would receive a diploma.

A stated meeting of the Society was held April 2d. President in the chair.

Examining Committee recommended Mr. A. B. Robbins, of Meadville, Pa., for membership.

Committee on College reported a petition and charter for the establishment of a Dental College at Philadelphia, and ask that the Society take some action on them. They offered the following :—

*Resolved*, That the members of the Society sign the petition, and that copies be sent to the Legislature of the State. Which resolution was **adopted**, and the committee instructed to proceed in getting a charter ; they to be the corporate body.

Librarian reported that he had purchased a book-case, the whole of the "Am. Jour. and Lib. Dent. Science," and subscribed for the "Dental Register of the West." Report accepted.

The resolution offered at last stated meeting in reference to the reduction of the initiation fee, was taken up and discussed at some length, when, on motion of S. L. Mintzer, it was laid over till next meeting.

The following gentlemen were unanimously elected members—Dr. C. A. Du Bouchet, T. L. Buckingham and M. Depuy.

Mr. M. J. Gallagher, of Wilmington, Del., presented to the Society, through Dr. J. D. White, his original articulator, with a



letter of explanation, which was read ; both accepted, and a vote of thanks returned.

Jones, White & Co. presented the Society a collection of minerals, which was accepted with the thanks of the Society.

Mr. Van Osten, a student in dentistry, presented a specimen of teeth made forty years ago from the sea-horse tooth ; accepted with thanks.

A letter from Dr. Jas. Parry was read, explaining his absence.

A communication from Mr. S. J. Dickey,\* which accompanied a specimen of osseous union of the teeth, was read and accepted.

On motion, adjourned to meet the 1st Tuesday in June.

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For the Dental News Letter.

## PROCEEDINGS OF THE SOCIETY OF THE ALUMNI OF THE BALTIMORE COLLEGE OF DENTAL SURGERY.

*At their Second Annual Meeting, March 24th-27th, 1850.*

The Society met on Wednesday evening, at 7½ P. M., in the hall of the College building, to listen to the regular annual address, from Dr. E. Townsend, of Philadelphia.

No abstract or remark of ours can do justice to this chaste and eloquent effort of our distinguished townsman ; and we are the more willingly silent on the present occasion, as we learn that the address is shortly to be laid before the profession. The true character, position and dignity of Dental Surgery were so beautifully set forth, and the means on the part of its votaries whereby this position was to be maintained, so clearly expressed, that every dentist present, whilst interested and instructed, must have felt at the same time proud of his calling.

It was much to be regretted that, in consequence of the extreme inclemency of the weather, so many of our Baltimore friends were deprived the pleasure of hearing this masterly oration.

*Thursday, 3 P. M.*—The Society was called to order, Dr. W. Colburn in the chair, and proceeded, after the proceedings of the last meeting were read by the Recording Secretary, to the transaction of the regular business, in the order as laid down in Art. IV., By-Laws.

A Committee of Arrangements was appointed by the chair, consisting of Drs. P. H. Austen, L. S. Burrige, J. Cherry.

The following resolutions were then offered and adopted by the Society.

1. *Resolved*, That the Treasurer of this Society be instructed to call upon delinquent members for the payment of their dues.

2. *Resolved*, That all committees appointed by this Society to

\* The communication will be found in this number of the "News Letter."—Ed.

prepare any paper, or report upon any subject connected with dental science, shall consist of but one member; and that Art. IX. Sec. 2, By-Laws, be thus amended.

3. *Resolved*, As an amendment to Art. VII., Constitution, that the annual meeting of the Society be held at such time during the week preceding the annual commencement of the Baltimore College of Dental Surgery, as the Secretary, with the advice of the President, shall, on the first of January, deem most suitable.

4. *Resolved*, That in event of the resignation or death of any officer or member of committee, it shall be the duty of the Corresponding Secretary to report the same to the President, who shall have authority to fill the vacancy, until the time of the next annual meeting.

5. *Resolved*, That the thanks of this Society be tendered to Dr. E. Townsend, for the very eloquent address delivered before them on last evening, and that a committee of two be appointed by the chair, to wait upon Dr. Townsend, and request a copy of the same for publication.

Drs. L. S. Burrige and M. A. Hopkinson were appointed by the chair to wait upon Dr. Townsend.

6. *Resolved*, That the thanks of this Society be voted to the Faculty of the Baltimore Dental College, for the use of the rooms so kindly offered to them.

7. *Resolved*, As an amendment to the 2d Sec. Art. III., Constitution, that the under-graduate members of this Society be eligible to the duty of preparing such papers and reports as may be appointed by the Society.

8. *Resolved*, That the Corresponding Secretary be empowered to enrol, as members of this Society, any graduate of the Baltimore College, who shall apply to him for admission, upon payment of the initiatory fee of \$3 to the Treasurer.

The following gentlemen, under-graduate members of the Baltimore College, were then proposed as active members, and unanimously elected: Mr. F. P. Abbot, of Mass., and Mr. Randolph Walton, of Annapolis, Md.

Dr. Chas. G. Davis made application for active membership, and was unanimously elected.

Drs. Cone, Austen and Burrige then proposed the following gentlemen as honorary members of the Society: Amos Westcott, Syracuse, N. Y.; Levi S. Parmly, New Orleans; Dr. Cleveland, Charleston, S. C.; Wm. H. Dwinelle, Cazenovia, N. Y.; T. W. Evans, Paris; James Robinson, London.

Reports of committees being then in order, the chairman of the Committee for Selection of Questions for Scientific Investigation presented five questions, from which the Society made choice of the three following:

1. The comparative merits of single teeth and blocks, with the best method of attaching the latter.



2. The different forms of suction plates—their merits, relative and absolute.

3. When and where is the extraction of teeth admissible in the correction of irregularity, and in crowded dentures?

Dr. Austen, chairman of Committee on Mechanical Dentistry, read a communication from Dr. J. U. L. Feemster, Va., member of said committee. He then stated that with the exception of this letter, he had received no material from others, from which to frame a report; that several subjects of interest which he was desirous of laying before the Society, demanded from him further experiment, which, in the ensuing summer, he should have leisure to make. He therefore begged leave to report progress. Dr. A. stated that he would either prepare said report in time for publication in the July No. of the American Journal, or present it at the next annual meeting, as the Society might determine. The Society called for the report at the next meeting, and continued the committee.

Reports from officers being in order, the report of the Treasurer, Dr. C. O. Cone, was presented, showing a balance in the treasury of \$6 55. The account was duly audited, and the report accepted.

An address was then read before the Society by Dr. Austen, from Dr. James Robinson, of London, who had intended being present and delivering the same in person, but was, by unavoidable circumstances, detained. The subject of the address was, The State of the Dental Profession in England. The address was one of great interest, but our limits will not permit us to enter into its merits. It is, we believe, about to be published in the American Journal.

Immediately after the address, the following resolution was offered and adopted:

*Resolved*, That this Society, through their Corresponding Secretary, express to Dr. James Robinson the pleasure with which they have just listened to his interesting address, and request of him the privilege of publishing the same in the American Journal of Dental Science.

The Society then proceeded to the election of officers for the ensuing year. The following were elected:

J. H. A. Fehr, President; Chas. W. Ballard, Vice President; C. O. Cone, Treasurer; P. H. Austen, Corresponding Secretary; H. Colburn, Recording Secretary. Standing Committee, C. O. Cone; Committee on Dental Practice, C. W. Ballard; Committee on Mechanical Dentistry, P. H. Austen.

# THE DENTAL NEWS LETTER.

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APRIL, 1850.

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Recently we paid a visit to Baltimore, and found the American Society of Dental Surgeons in session, in the Baltimore Dental College. It was an adjourned meeting, and was attended by gentlemen from New Orleans, Charleston, Wheeling, Washington, New York City and State, Philadelphia, &c., beside the members residing in Baltimore. This manifests the right spirit. For when men will come for this purpose the distance some of these have, it proves, conclusively, that they have the advancement of the profession and the Society at heart, and are willing to make some sacrifice of time and money for the accomplishment of that object.

We were much interested with a lengthy biography of Dr. Nasmyth, of London, read by Dr. C. A. Harris, and which was prefaced by some very feeling extempore remarks in reference to the decease of several members of the profession. We heard read, also, an able and appropriate paper, on the subject of the Amalgam controversy, by Dr. E. Townsend, of Philadelphia, which was referred to a committee, who are to report at the next meeting of the Society; when, we trust, the address and committee's report will be published. The meeting was an interesting one.

We were not present at the Commencement of the College, but learned that there were nine graduates, from a class of some thirty-one.

A report of the proceedings of the Alumni attached to the Baltimore College, will be found in our pages.

This number of the News Letter, as will be seen, is principally made up with original matter. We have had to lay over some selected articles already in type, to give place to original matter. This is cheering to us, and we trust our correspondents will not slacken in their efforts to contribute to the literature of their profession, and thus give us an opportunity to gratify our desire to enlarge the News Letter.

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## KEEN RETORT.

The following very laughable and *pointed* reply, we cut from a political paper:

“A dentist while addressing a political meeting in Michigan, was assailed by a loafer of the opposite party with ‘Doctor, how much do you charge for pulling a tooth?’ To which the dentist replied, ‘I’ll pull all of your *teeth* for a shilling, and your nose *gratis*.’”



We would have been pleased to have devoted some space to the evidence of Dr. Keep, on the recent trial of Professor Webster for the murder of Dr. Parkman, and particularly on that point which relates to the identification of the teeth. His testimony furnishes, to our mind, the strongest evidence of the death of Dr. P. that was brought out.

We can never doubt the fact that a manufacturer of *blocks* could easily identify his own work, no matter what heat they had been subjected to, short of fusion, and provided a sufficiently large piece was left to give the characteristics, or his manner or style of carving. This, with Dr. K.'s positive and direct testimony, leaves us no room to doubt the truth and force of the evidence; but all must have read it, and our limits will not allow us to say more now, further than to call the attention of the profession to the importance their occupation assumes in this case, and the probable necessity of being prepared for a like case, by preserving their plaster casts properly labeled, &c., and making note of the peculiarities in the various cases which they supply, in a book suitable for the purpose.

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*Antiquity of the Dental Art.*—In looking over a pamphlet entitled "Ancient America," we found the following little article which struck us as being interesting and important, as showing the antiquity of the dental art.

"Dr. Dickeson, of Mississippi, has been penetrating a large number of mounds in the south-western States. In these he found interesting relics, such as mica mirrors, silver and copper ornaments, beads of jasper, agate, &c., similar to those found in Mexico. Several pearls of great beauty and lustre, an inch in diameter, have been found. By an examination of skulls, Dr. Dickeson discovered that *dentistry had been extensively practised by this ancient people, as plugging the teeth, and inserting artificial ones was common.*"

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We add the following to our list of Agents. Dentists in their respective neighborhoods can now supply themselves more expeditiously than heretofore.

G. & J. G. Hill, Druggists,	Detroit, Michigan.
Geo. Coster & Co.,	" Mobile, Ala.
Clark & Allison,	" New Orleans, La.
Chas. A. Heinitsh,	" Lancaster, Pa.
Dr. E. L. Strohecker,	" Macon, Ga.
Dr. J. E. Cleveland,	" Charleston, S. C.
Norton & Whitney,	" Lexington, Ky.
Aaron Stretch,	" Nashville, Tenn.
W. M. Hughes,	" Madison, Ind.
F. H. Clark & Co., Jewellers,	Memphis, Tenn.
C. A. Dickinson,	" Richmond, Ind.

## GOLD MEDAL.



In the October number of the News Letter we stated, that we had been informed by a friend, that the Mississippi Valley Association of Dental Surgeons had awarded us a "*Twenty dollar Gold Medal*," for one hundred of the best teeth, and we have now to acknowledge the reception of the medal, which for beauty of style and workmanship, cannot be surpassed. We had some misgivings, that "way out West" they could not do such things as neatly as we could here, but in this we have been agreeably disappointed, and now promise, that hereafter, we will never accuse them of a want of taste or ability in getting up a neat medal, at least.

We now give the letter accompanying the medal.

CINCINNATI, March 4, 1850.

*Gentlemen:*—Having been appointed as a committee, at the annual meeting last September, to have the accompanying medal prepared for you, I had hoped to have been able to have forwarded it to you long since, but have been disappointed. I now take pleasure in sending it, hoping it will meet with your approbation.

Yours respectfully,

CHARLES BONSALE.

TO JONES, WHITE & McCURDY.

We have had wood cuts prepared of both faces of the medal, and thus give our readers an opportunity of judging its size and style.

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*A Beautiful Present.*—While upon the subject of medals, we must say something of a splendid present in the shape of a BREASTPIN, containing eleven diamonds, and in the centre a small porcelain tooth, all mounted in twenty carat gold, and sent us by a gentleman whom we have never had the pleasure of seeing, but who has been using our teeth for years. Without his authority or knowledge, and knowing it was not written for publication, we trust he will pardon us for the liberty we have taken in



publishing the very complimentary letter which accompanied his beautiful and greatly prized "token of esteem."

ST. LOUIS, January, 1850.

MESSRS. JONES, WHITE & McCURDY.

*Gentlemen*:—Permit me to present to you this small token of my esteem, generated by feelings of obligation, which I, as a member of the dental profession, have felt toward the manufacturers of the most artistic and useful artificial teeth I have ever seen or used. In using teeth of your make, I have been saved *much* labor, and I have had the satisfaction of supplying my patients with pieces that looked like teeth, and not like kernels of southern corn strung on a string. Accept, also, my thanks and best wishes for your success and abundant patronage, of which I feel sure, for it is certain that your teeth need only to be brought under the notice of the dentist, whose eye is educated, to ensure a patron. I am, gentlemen, with much respect,

Yours sincerely,

JOHN S. CLARK.

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*Steel Foil Scissors*.—We have imported a beautiful article of this kind, in consequence of the demand for them. Many objected to the kind usually made with pearl handles, in consequence of their extreme liability to break, and desiring that the handles should be of steel. We are now ready to supply just the article required.

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From the Dental Register of the West.

## MOULDING.

DR. TAYLOR—I have, for about two years past, made use of an article for moulding, which I consider far superior to any thing we find mentioned in "the books," or by our instructors, for that purpose. It is common Spanish whiting, used dry, or containing no more moisture than it absorbs from the humidity of the atmosphere.

The principal advantage gained by the use of whiting is the *beauty and perfection* of the cast taken from it, which is a desideratum with many operators, particularly in atmospheric pressure sets.

The whiting should be made free from lumps, (it requires no other preparation,) and used the same as sand.

If you consider the above information of any importance to the Dental profession—if it will add one item to the many facilities which we possess more than our fathers did—or if it will make any advancement toward that professional perfection at which every dentist ought to aim, you are at liberty to make such use of it as will best subserve these important interests.

E. S. HOLMES.

# THE DENTAL NEWS LETTER.

Vol. III.

JULY, 1850.

No. 4.

For the Dental News Letter.

## TREATMENT OF DENTAL PULP PREPARATORY TO PLUGGING.—*Continued.*

BY J. D. WHITE, M. D., DENTIST.

Arsenious acid *is*, undoubtedly, the *destroying agent* in every form in which it can be used. A great many dentists are now using it, combined with morphia, and with success. I cannot understand why the preparations of morphia will not obtund, to some extent, sensibility in the pulp of a tooth. They are applied with that view, to other parts of the body,\* and not without good effect. I know well that the sulphate of morphia, alone will suspend pain in the pulp, when it only arises from inflammation of that substance. I employ it constantly for that purpose, and sometimes combined with tannic acid; and always succeed in stopping the pain, even though it has been occasioned by the application of arsenious acid alone, if the external membranes are not much involved.

*Arsenious Acid, Morphia, and Kreosote.*—This is, perhaps, the best form of using arsenic that has yet been devised. I have not seen it spoken of by any authors. I have been using it thus since 1840 as a general substance for destroying the pulp, but I have tried arsenic in various other forms, as well as many other substances, before and since that period. There is no difference, in this form, in the rapidity with which it unites with the pulp, than when the kreosote only is properly combined with it; but the morphia will exert its narcotic influence, and lessen the pain; an effect which we do not often obtain with kreosote. The kreosote cannot be regarded in any other light than as a mere vehicle for the proper application of the arsenic.

R. Arsenious acid, - - - gr. xxx.  
Morphia sulphas, - - - gr. xx.  
Kreosote, q. s.

Misce.

Put the arsenious acid and kreosote in a glazed mortar, and grind until the arsenic becomes impalpable; then add the sulph. of morphia, and continue the trituration for some time, with a view

\* "They are applicable to all cases where the object is to relieve pain, or allay nervous irritation in any shape."—*U. S. Dispensatory.*



of completely incorporating both ingredients, and adding a little kreosote to keep the mass of about the consistency of thick cream. Prepared in this way, the arsenic is in a better condition to unite speedily with the pulp than the mere dry powder of arsenic, on account of the kreosote holding a large quantity of it in solution; and it becomes more minutely subdivided when triturated in an oily substance than in the dry state.

*Manner of Applying the Paste.*—In the application of this paste, or in fact of any substance for the treatment of the pulp, great care should be taken to free the cavity of decay of all foreign substances, as well as the decay immediately over the pulp cavity, so as to be able to place the paste in immediate contact with the exposed pulp. This precaution should never be neglected; because, if the pulp is inflamed at the time the application is made, the simple removal of the decay will excite bleeding, and relieve, or wholly stop, the pain; indeed, it is very frequently that nothing more is required to cure a bad attack of toothache. And again: if it be not inflamed at the time, the action of the destroying agent will excite the determination of blood to the pulp, and by being thus congested in a shut cavity, and incapable of expanding or bleeding, will produce great pain, wholly independent of the escharotic agent; whilst, on the other hand, the patient would only experience a gnawing sensation, or dumb pain. A pledget of cotton, about the size of a small pin's head, steeped in the paste, is sufficient. If the pulp bleed when the cavity is cleansed, we must wait until the bleeding subsides before we apply it, as it would dilute the preparation and diminish its action. The cavity may then be filled with cotton, and left to remain in from ten to sixteen hours. If it be in the case of a young patient, the bone will absorb a sufficient quantity of the arsenic to inflame the alveolo-dental membranes; and of course it should be removed, in such cases, in a shorter time than it could be left with safety in the case of an older patient, or a dense and opaque tooth.

I sometimes place a layer of tin foil over the paste after it is introduced, with a view of preventing it from being absorbed by the cotton, especially if it be between two teeth, both of which are decayed, and it is not desirable to destroy the pulp in both. We have seen cases where substances have been placed in one tooth to destroy the pulp, while the adjacent tooth was not decayed to the nerve; and the cotton absorbing the poison, it would pass over to the adjacent tooth, and permeate the thin stratum of bone protecting the pulp, and either inflame or destroy it, and give both patient and operator great trouble.

Softened beeswax and pastes of various kinds are objectionable, because they will not allow the air to escape from the cavity while packing them in, and therefore, by forcing a column of air against the pulp, it induces pain. Where the cavity cannot be

sufficiently well shaped to allow of the secure package of the cotton, or where there is no adjacent tooth to support it, as on the labial surfaces of the teeth for instance, I am in the habit of placing a roll of cotton over the cavity, and then throwing a ligature around the tooth to secure it.

An escharotic ought never to be applied in the after part of the day, or at night, to destroy the dental pulp, and especially in patients of a high nervo-sanguine temperament; because teeth are more liable to pain at night, from the increase of the nervous susceptibilities and the febrile exacerbation and determination of blood to the head and face, that all are more or less liable to as night approaches. I very frequently narcotize the pulp, by applying morphia for a day or two before the application of the paste, if we fear its giving pain, and apply the escharotic in the morning. By this method, the most happy results have been produced in the treatment of the most nervous patients. Some of the reasons why I prefer using the arsenious paste are, 1st. It destroys the vitality of the pulp in a shorter time and with less severe pain than in any other form in which I have used it. 2d. It less frequently causes inflammation of the external membranes than when applied alone, from the well-known principle that the more speedily it unites with and produces the death of a part, the less extensively will it be absorbed; and, 3d. It produces a more extensive and perfect slough of the pulp, and of course favors its removal more effectually from the roots without pain. It is upon this latter effect that the preservation of the tooth mainly depends; and it would seem that dentists have pretty generally overlooked this necessity, under a false idea that the tooth is thereby rendered inevitably a foreign body, and consequently becomes itself a cause of exciting inflammation. I consider the actual cautery as preferable for removing the pulp, where it can be applied, to the use of acids, and often use it in treating the pulp, preparatory to setting pivot teeth.

*Manner of Removing the Pulp.*—After the paste has been in, the allotted time, see the patient, and remove it. Then, with a small pointed instrument, wound the pulp to excite bleeding, to relieve the tension of the blood-vessels of the apex of the fang, and prevent the pain that would otherwise be produced by enlarging the orifice leading from the cavity of decay to the pulp cavity. Now open the orifice of the internal cavity well, quite as large as the largest part of the pulp cavity; then, with an annealed wire fitted into an ordinary drillstock for the purpose, and bent to suit, and *barbed* with a sharp knife, so that when it is passed into the canal alongside of the pulp, this sharp, jagged instrument will lay hold of the mass of the pulp, and with a sudden jerk very probably the whole pulp will be extracted, or at least it will break off at the line of demarcation between the living and dead parts. If this barbed instrument be as pointed as possible,



it will pierce the pulp or pass along the canal to any desirable extent, without pushing the pulp or the contents of the canal of the root, before it: and again, if the sharp teeth lay backwards, or towards the shaft of the instrument, they will not produce much obstruction in entering, but on withdrawing the instrument they will inevitably bring with it the contents of the canal or cavity. If this instrument be filed to a flat square, and the edges barbed, they will be sharper than if the teeth were cut on a round or flat surface. To pass deep into the root through a winding cavity, where a steel instrument cannot well be used, a common quill of hard texture, prepared like the steel instrument, will be useful, as it is more flexible. We use the quill entirely for mopping out the root, in washing away the blood, and putting any substance deep into the root. I do not often apply the paste a second time, especially if the pulp is destroyed to a considerable extent by the first application, but apply a small quantity of *caustic potash* or *chloride of zinc*, as either of those substances will produce a speedy slough, in this condition of the pulp, without pain, whilst if either be applied to the pulp in a healthy state, they will excite intense pain, and not destroy the pulp for any depth. I also use *burnt alum*, *tannic acid*, or *nitrate of silver*, in solution, or in the stick, as the circumstances of the case and the locality of the tooth would allow; as, for instance, it would be improper to use nitrate of silver in a front tooth, as it would, without great care, discolor it. Sometimes, if all the pulp cannot be taken away, by waiting a few days, the balance will slough, and it can be removed with facility. It is yet a question with me whether the pulp should be removed to the very apex of the root, or only within a short distance of it. We know well that the only evil of removing the pulp is the wounding or communicating inflammation to the external membranes, and it seems to me that if we remove the pulp to the end of the root, and there is any irritability in the constitution against us, it must act upon the external membranes at once; and that approaching so close to the apex, we cannot avoid exciting some irritation, whilst if we leave a small portion of the blood-vessels remain, say an eighth or quarter of an inch, as the canal in the root is wide or narrow, as a kind of neutral ground to work on, in this way we would not be coming close enough to the external membranes to produce irritation, and there would not be sufficient of the fragments remaining to do harm. Neither do I see why we could not get rid of so small an amount by absorption, as the external membranes could do without it, in the same way that we get rid of the small shreds of blood-vessels elsewhere under similar circumstances. Although, in removing several nerves in the same mouth, I have had trouble with those that have been partially removed, and not with those that had been entirely, and vice versa; still I give the preference to leaving some neutral ground. Yet I do

not leave sufficient to invite an afflux of blood to the parts, or any part that can be taken away with the smallest flexible probe.

*Plugging the canal of the root or nerve cavity.*—I do not think it prudent to plug the root as soon as the nerve is removed, on account of the bleeding that generally follows, even though there be no bleeding; because it is evident that the blood that returned through the pulp must now return by anastomosing vessels, and which will give more or less turgescence to the blood-vessels of the root, and become augmented by the pressure of plugging. It is therefore important to wait for several days, as the case may be; in the meantime see the patient, in order to remove the clot of blood that forms in the cavity until the bleeding ceases; and then at last, fill the whole root with a tent of cotton imbued with alum-water, for a day or two, upon the withdrawal of which, if there be no bleeding, the root may be filled with gold. I *never* use tin in the root of a tooth: some I fill in three days, and some in two weeks, depending upon the condition of the external membranes. I take a piece of gold leaf, cut it triangular, (No 6 will do, but 15 is better,) and beginning at one corner, roll it into a pointed roll, and as hard as possible; this will make a flexible gold wire, which can be passed, if necessary, to the apex of the root. If it be too pointed or sharp, cut it off with the scissors at such point as to be thick enough to choke the cavity before it gets to the fragments of remaining blood vessels, or going through the foramen at the apex of the root, for it would in either case bring on inflammation. Then follow this with a small annealed plugger, having a great number to fit different localities, of higher or lower temper, as may be desired, the larger ones to go far into the root, to be fitted extemporaneously, and used until a harder and stronger one will apply, making still greater and greater pressure as we near the neck of the tooth, when a very strong instrument must be used, as the plug at this point must be very hard, to prevent the tooth from becoming discolored, it ought to be hard to the end of the root; but I know of no way of getting an instrument in, strong enough to make it very hard in some cases. Now the first of these pluggers must be rather soft; still, not as soft as steel can be, and rubbed with a burnisher towards their points, as that process will lay a kind of burr towards the points, and when used will carry the gold in, and not withdraw it on removing the instrument. It will also harden those sufficiently that are to be used first, without plunging them into water. When the root of the tooth is filled level with the floor of the cavity of decay, I am in the habit of burnishing the surface of the plug, to shut off the possibility of dampness escaping into the external plug. It is obvious that if the natural cavity of the tooth be firmly plugged with gold, the tooth will be in a better state of preservation than if the cavity be open or plugged with any other substance, as it will effectually prevent



the dampness, pus, air, &c., from acting on the walls of the cavity. I need not say what nastiness gets into that cavity, as once cleaning it out when the tooth is in a diseased condition will explain it much better than I can. Again, as the tubuli of the body of the tooth radiate from the pulp cavity to its periphery, an impervious plug will shut off the discoloration so much complained of when the pulp is destroyed, as all that so much-dreaded "blueness," "purple," &c., is from infiltration of the tooth by the contents of the pulp cavity. In this way, the whole body and root is saturated by the morbid fluids bathing that cavity, until the whole tooth is dead. I never think of a tooth becoming discolored, if my patient will give it as much attention as I propose to give. It therefore never happens, except by carelessness on my part, my patients', or imperfect operations.

I copy the following from my Thesis paper, written in the winter of 1843-44. It may not be uninteresting to give a list of cases which I kept during April and May of 1842. In one hundred successive cases, the pulps [were destroyed in eighty-four without pain; the remaining number, sixteen, gave pain, the average duration of which was one hour. The pain was most severe, and of greatest duration, in patients of a strong nervo-sanguine temperament; but even in those cases, if the pulp had been subject to frequent attacks of inflammation, it rarely gave pain when the paste was applied. Again, patients of scrofulous diathesis rarely suffered pain, whether the pulp had been previously subject to inflammation or not. I have extracted six of the above one hundred cases since the spring of 1842, for alveolar abscess, (time about twenty-two months,) but I was not able to trace the whole number any further to obtain the ratio. Some, however, are still good, (1850,) and those that have been lost had not been plugged well in the roots. I never could succeed in saving teeth satisfactorily by plugging over the nerves, either by "caps," made according to special patterns, or methods of plugging, or interposition of non-conductors or non-irritating substances, such as *asbestos*, *charcoal*, *cotton*, etc., etc. I have kept a diary of cases, which will be useful to refer to, as well for my own practice as for others. The last special list was kept during October and November, 1849, of seventy cases that had been plugged over the nerves, and numbers of them by some of the most careful operators in Philadelphia, as well as in neighboring cities; none of them have been extracted up to this time, after filling in the roots, to my knowledge. Nearly all of those cases were giving pain at the time, and some of them had gone on to alveolar abscess, and were in a very unhealthy state. But this would lead to the consideration of alveolar abscess, which was not contemplated in the limits of these papers, but which, if time can be spared, and health permit, I will take up at some future period. I cannot close without acknowledging myself under the

deepest sense of gratitude to the proprietors of the "Dental News Letter" and those other valuable journals that have done me the honor of publishing the above hastily written papers. Though hastily written, they are not hasty conclusions, as I have given them the most deliberate reflection and experiment, and their strict observance lead me daily to the most happy results. My humble exertions have been, and ever shall be, to arrive at the best and most truthful methods of alleviating human suffering, and I would earnestly and respectfully solicit every fellow-laborer in our useful avocation to aid in the elucidation of this intricate subject. He who corrects most of my errors, and teaches me most, does me more service and honor than he who adopts and applauds the result of my labors.

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For the Dental News Letter.

## REPORT OF PROCEEDINGS OF THE PENNSYLVANIA SOCIETY OF DENTAL SURGEONS.

A special meeting of the association was held June 25, 1850. Mr. C. C. Williams president. After the usual preliminary business, the committee to whom was referred Evans' Amalgam, made the following report, which was accepted, and the committee discharged. The resolution which is appended to the report was adopted.

### REPORT OF COMMITTEE ON DR. EVANS' AMALGAM.

To the President and Members of the Pennsylvania Association of Surgeon Dentists:

GENTLEMEN—Your committee, appointed at the stated meeting held on 6th February, 1849, and to which was referred Dr. T. W. Evans' Amalgam, respectfully beg leave to report, that they have attended to that duty, and submit the following conclusions, to which they have arrived, viz:

1st. As to the general question of the use of amalgam, and other compounds of the baser metals and pastes, as a filling for teeth, your committee would not wish to be comprehended as restricting any member of the profession in their occasional use, as directed by the exercise of their deliberate judgment; but as a general substance for filling, would condemn it, and would in any case recommend the observance of great caution. Notwithstanding the violent and much to be deplored dissensions which have existed for the last few years among the most eminent in the whole domain of the profession, still, the subject of these preparations for fillings has received the closest scrutiny, and the most extensive and multiplied experiment, and sufficiently careful to have settled, beyond the question of controversy, the impropriety of uniting any two kinds of metals whatever in the same filling, or the same tooth. Those dissensions have had their beneficial influence, however, in a two-fold light—first, that of directing the



most careful inquiry into a subject of the greatest magnitude to the profession; and secondly, by the publication, through the journals of the country, of the separate views of the different observers, have also contributed to enlighten the reading public. And as far as your committee are able to judge, the most intelligent class of the community receive with suspicion any compounded material for filling teeth, and mostly refuse, positively, to submit to its employment. Although your committee were appointed to consider the subject of Evans' Amalgam only, still, as it is so identical with most others that have been, and are still in use, except that it contains *cadmium*, they consider it a fitting occasion to remark upon amalgams and compounds as a general subject, and express their convictions, with a view of settling the matter, as far as those substances are concerned, at once; and moreover, as the most objectionable and important ingredient in it is also contained in most others, viz. *mercury*. Now, as to the deleterious influence of mercury on some constitutions, there remains no longer a doubt, even though received into the system by the slow process of the decomposition of a plug or a number of plugs in the teeth of a patient. In fact, cases are constantly coming to light, through the most respectable sources, sustaining this conclusion, and as Evans' Amalgam, as well as all others, are destroyed by the action of the acidulated secretions of the mouth, in some or most patients, it loses its value as a safe material for filling teeth. Yet your committee are aware that some patients do not present the appearance of suffering from its use; still the operator cannot know, by any external or other signs, in which or what kind of constitution or temperament, it may with safety be employed.

2dly. With regard to the merits of Evans' Amalgam. Your committee have been anticipated by the author, in a communication to the proprietors of the "Dental News Letter," under date Paris, Dec. 11, 1849, in which he holds the following language:—"Finding it to differ so much in different cases, I am induced to regard it as at best an uncertain article. I do not feel satisfied to use it, even as an expedient, under such circumstances; having no confidence myself in its durability, I do not feel justified in recommending its use to the profession." Notwithstanding this renouncement by the author, he makes use of the following commendatory language in a communication to the proprietors of the journal named above, under date London, April 20, 1849: "The first in the profession in London have pronounced it the very best ever invented. Finding this, I cannot feel myself justified in withholding it from the profession. I propose publishing it freely. I have never had any thing belonging to dental science that I wished to conceal, and this being an article intended to benefit humanity, I therefore wish every one to be the possessor of it. I think it must supplant the many substances which are

used, most of which I cannot but feel are very deleterious; this, I *know*, is not." He further adds a series of reasons why it is superior to any heretofore in use, and claims for it a number of special merits, among which the subjoined are the most important. 1st. "There is in it no ingredient that can possibly render it improper to be employed in the most delicate constitution; it is perfectly harmless, both as it respects the general health and the teeth themselves." 2dly. "Almost *immediately* after introduction into the cavity, it becomes hard, and as it hardens, it *expands*." 3dly. "A cavity filled with this compound is altogether impermeable to the fluids of the mouth, and strong tests have proved its perfect insolubility," and, 4thly, "The most delicate comparison of the weight of the filling at the time of insertion, with its weight after having been in the mouth, proves that it undergoes no change whatever in this respect."

Now, with regard to the first and important merit claimed for it, your committee would dissent in the strongest terms, and it is the first time your committee have heard any one claiming that mercury is not "improper to be employed in the most delicate constitutions, as respects the general health or the teeth themselves."

The citation of the following case will fully illustrate many of its characteristics as a useless substance, and explain nearly all points of objection to it: a lady of twenty-five years of age, high nervo-sanguine temperament, in general good health, teeth much disposed to decay, highly sensitive, and would not hold plugs well, had the second right superior molar plugged on the back part and palatine surface—the plug supplying about two-thirds of the whole substance of the tooth; the nerve was dead in the tooth, and it had been plugged for some time with tin or gold, and answered the purpose of attachment of a partial set of artificial teeth for a long time; it never had been sore in the gum. It was filled with great care, and was understood by the patient as an experiment with a new and highly extolled amalgam. Upon putting the tongue to it there was a very strange sensation—a peculiar, pungent and cold sensation—which was very much increased on putting the band on the tooth. This became a source of considerable annoyance for some weeks, when it diminished by degrees, leaving the tooth sore in the gum, somewhat loose, and with pain and uneasiness all the time; finally, in about three months, the plug commenced crumbling out, and the first sensations passed off—that of cold pungency. The balance of the plug was removed, and presented the appearance of gray ashes, the mercury had been entirely absorbed. There is not the least doubt but that the secretions of the mouth operated to dissolve this plug very rapidly. The adjacent teeth, as well as the plugged one, were quite yellow. The same tooth was plugged with tin in a few days, with a great deal of labor, when none of



these symptoms were experienced, the spunginess of the gums left, and the tooth is firm. Three cases out of four terminated in this way.\* On the other hand, a gentleman fifty years of age, of general good health and good constitution, had the back part of the second inferior molar (nerve dead) plugged, and it comes in partial contact with the food in chewing, does not produce any unpleasant symptoms, but is not as good as gold or tin in the same place, as it wears away very fast. They have all complained of a cold sensation about the teeth plugged with it. Now, under such circumstances, all its "peculiar merits," as to "impermeability," its harmlessness in the most "delicate constitutions," maintaining its specific gravity, etc., etc., fall, with the plugs, *to pieces*. And all that is left for the committee to say is, to compliment the generous and liberal feeling which stimulated the inventor to lay it freely before the public. If all were to appreciate the lesson this substance and the inventor's course affords them, there would be many more good things in use, and many more bad ones out of use.

All of which is respectfully submitted.

*Resolved*, That while your committee do not wish to restrict any member of the profession in the use of amalgam, as a temporary filling, knowing that a discerning public will govern him in that respect, as regards its use, to the exclusion of gold,—more than all the laws and resolutions a society could adopt; still, they would recommend the entire abandonment of it as a safe and permanent filling for teeth.

F. REINSTEIN,	} Committee.
C. C. WILLIAMS,	
W. R. WHITE,	
S. L. MINTZER,	
A. R. JOHNSON,	

The committee to whom was referred all specimens of teeth sent for competition for the medal offered by the society, made the following report, which was accepted, and committee continued, to complete the duty of procuring the medal. The resolution annexed to the report was unanimously adopted.

#### REPORT OF THE COMMITTEE ON PREMIUM TEETH.

To the President and Members of the Pennsylvania Association of Surgeon Dentists.

GENTLEMEN—Your committee appointed to examine such specimens of teeth as might be presented to them under the resolu-

\* A young lady, twenty-five years of age, general good health, nervous temperament, teeth generally good, and hold plugs well. Inferior left second molar, large plug, nerve not destroyed, been plugged about one year, has never given any unpleasant symptoms, does not wear any, but is not used in masticating; gives satisfaction.

tion passed by the Association, beg leave to report, that they have attended to that duty, and respectfully submit the following:

That there have been three samples of single teeth presented, viz:

1st. *Pivot teeth*, front and cuspidati.

2d. *Plain single teeth*, front, bicuspidates and molars.

3d. *Single gum teeth*, front, bicuspidates and molars.

The committee, by mutual consent, determined that each member should proceed to examine the different specimens alone, and note down in writing the results of his experiments, tests, and the conclusions to which he arrived, without consulting with, or knowing the opinions of, either of the others, in order, first, to arrive at an impartial conclusion, and without the bias that the mind of the one might get by knowing the opinions of the other; and second, that the teeth might be subjected, in that way, to a greater variety of tests, and to prevent the possibility of the appearance of collusion on the part of the committee, in the conducting of their deliberations. After which, notes were compared, and the following conclusions drawn, viz:

1st. *The Pivot Teeth*.—They are new in shape on the posterior parts, and which with the enamel reflected over their cutting edges nicely, and in some respects improved in shading, gives to the teeth, when set, a more natural and pleasing appearance than any heretofore within the knowledge of your committee. The pivot holes are well proportioned to the different sizes, and so directed as to dip deeply into the bodies of the teeth, and their structure is stronger than any the market affords. They are a decided *improvement in strength*.

2d. *The Plain Teeth* withstand the direct application of the flame of the blowpipe upon their enamelled surfaces, without undergoing any change or destruction of their color, to a much greater degree of heat than is necessary for soldering; hence, when they are set, they come from the fire with the same clean and lively appearance as when they were first put in, thus avoiding a very common and frequently very great annoyance experienced in working many teeth that are otherwise good and well shaded. They will, with the usual precautions, stand the sudden transitions of heat and cold better than teeth of so translucent a structure usually do. And under the hammer, the platina pivots can be mashed down to a flat rivet head against the surface of the tooth, with the plain face of the hammer, with a steady hard stroke in a direct line with the shaft of the pivot, without the pivot acting as a wedge to split the tooth, or jarring loose this attachment, and thus proving their *superiority in strength*, and rendering them capable of being rivetted strongly, where it is not desirable to solder.

3d. *The Gum Teeth*.—These are a very great improvement over any others that your committee have ever had the pleasure



of examining. They also withstand the direct flame of the blow-pipe upon their bare enamelled surfaces, without either changing the color of the teeth or the gum; a severe test, that few gum teeth, if any, heretofore, would bear. Indeed, the gum color comes from the fire untarnished; it seems to be fixed by a new and superior method. Numbers of this sample were submitted to the careless application of the blowpipe upon the enamelled surfaces, upon a piece of charcoal, when ends of the teeth were heated above redness, while the other ends were still dark, without breaking, proving that they would bear the effects of unequal temperature to a very great degree. They will also stand the force of rivetting down the pivots to a flat head upon the surfaces of the teeth without splitting or jarring them loose. In fact, the whole lot are better pivoted than any your committee have ever examined. Their general finish and shape is exquisite, and when ground together present a more free and easy shaped set of teeth than any the market has ever supplied. The masticating or articulating surfaces of each sample of the bicuspidés and molars are new, and better suited to the purposes of the wearer and the dentist, if properly selected, than any within the previous knowledge of your committee. The *sharpness of their features*, so to speak, is exceedingly delicate and beautiful, so as to render them worthy of the highest commendations.

In conclusion, the general agreeable appearance, and superior finish and workmanship of all the samples named, are of the highest order, and with the few points of merit which your committee have thus briefly sketched out, together with others which might be enumerated, unanimously and cheerfully agree that they entitle the manufacturers to the premium of the *gold medal* offered by the Association. Your committee would also report that there were several specimens of block teeth presented, but none superior to those heretofore in use.

All of which is respectfully submitted, together with the following resolution:

*Resolved*, That the premium of twenty-five dollars, in a gold medal, which was offered by this Association for the greatest improvement in porcelain teeth, be awarded Messrs. Jones, White & Co., for the *most improved artificial teeth*.

Signed,	C. C. WILLIAMS,	} Committee.
	J. D. WHITE, M. D.,	
	ELI PARRY, M. D.,	

Examining Committee reported the names of Messrs. J. Stovell and J. McCalla for election to membership.

Dr. J. D. White presented the Association with a specimen of irregularity, showing a new and ingenious method of correcting it, by the use of spiral springs.

The specimen was accepted, with the thanks of the society. Adjourned.

For the Dental News Letter.

## REGULATING TEETH BY SPIRAL SPRINGS.

MESSRS. JONES, WHITE &amp; Co.

*Gentlemen:*—Accompanying is an arrangement, with bands and spiral springs, for enlarging the superior maxillary when it is contracted by premature extraction of the deciduous teeth, or any other cause, which I have used with success, in many difficult cases, for many years, as well for expanding the arch as the regulation of teeth. You will perceive that it is calculated to keep up an equal and perpetual pressure on as many teeth as is desirable.



The accompanying model presents an interesting case, and illustrates what are, too often, two inexcusable errors of the past and present generations, and of daily occurrence. 1st. That of extracting the deciduous canine teeth, to give the lateral incisors room, as it is termed, and which, as their unabsorbed fangs leave a deep wound, in healing, draws the lateral incisors and

first deciduous molars together, contracts the alveolar arch, and allowing the laterals to fall backwards and inwards, dragging the lateral edges of the front incisors along with them, and sometimes before they are long enough to grasp the inferior teeth, in advance, they are much behind them; and 2ndly. To mend the matter, when the permanent canine teeth make their appearance, apparently too far outside of the arch, (it is true but a deformed arch,) and only room for half a tooth between the laterals and bicuspides, and in some instances none at all, either they or the first molars, the most valuable teeth in the head, or the bicuspides are doomed to extraction, to make still *more room*, instead of endeavoring to remedy by art what ignorance has done, enlarge the arch and bring out the six or eight stray teeth to the canines, which are in most cases in their proper places. The manner of making it is exceedingly simple: make a plaster model of the mouth in the usual way, then fit a light band around each tooth, joining each other at feather edges between the teeth, instead of filing between, that requires to be thrown outwards. Say, for instance, it is the superior bicuspides of either side, solder those bands together on the palatine sides of the teeth, then solder a short piece of round wire on the same sides of the bands near their middle, and thick enough to allow of slipping on a spiral spring long enough to extend from one side of the arch to the other, and to lie close along the posterior parts of the front teeth; now if those bands are nicely fitted around the teeth the apparatus can be worn with comparative comfort; the patient can go to school, (as it is generally in "school days" that the



operation is required,) or even into society, without exposing so much gold as those horrible "bars" that go all around the front part of the teeth and gums. Another method of applying the spiral spring, and which is original with myself, though I do not name it to claim any credit, is as follows:

It often happens that the two lateral incisors are grasped posterior to the inferior teeth, and the front incisors are in their proper positions. By lashing down the extremities of a piece of spiral spring to the necks of the lateral incisors, and the spring extending across the two front incisors, you will perceive that they become a fulcrum for the spring to throw the laterals over the lower teeth. As the spring straightens, the laterals will be brought on a line with the central incisors. It is generally true, that, as the front teeth are harder to force backwards, on account of the alveolar process being thicker on that part than the external alveolar plate, and the teeth being large too, that they afford a sufficient fulcrumage. But if they be not, place a plate in the roof of the mouth, and fasten it to the back teeth, as if it were to set teeth, letting small pieces of plate project forward and downward against the posterior parts of the front teeth, which will prevent the possibility of their being pressed backwards.

But if it be like several cases that I am treating now, where the front teeth are too far out, by the time the laterals are well forward the fronts will be depressed sufficiently. Or when the median edges of the front teeth present the appearance of bulging out, the spring pressing upon them will level them down properly. If the laterals be too long to sweep over the lower teeth, solder to the plate, if there be one in the mouth, an inclined plane to keep the jaws apart far enough for that purpose. When the plate is not in, lash an inclined plane to one or more of the teeth. Never put a cap over a tooth to receive the direct or full stroke of the jaws in masticating. I have seen cases where the enamel has been literally mashed by that means. As many injuries have been sustained in various ways, in the treatment of irregularity of the teeth, many persons needing attention will not venture to submit to the operation. All cases require close watching, that too much pressure is not produced, so as not to establish periosteal inflammation in teeth that are not fully developed.

I also use the spiral spring for turning teeth that stand across the alveolar ridge. There are a great variety of ways of applying those springs, so as to make a very neat and comfortable apparatus for enlarging or contracting either of the maxillaries, or for operating upon a single tooth.

If the foregoing is worthy a place in your valuable journal, please insert, and oblige

Your humble servant,

J. D. WHITE.

For the Dental News Letter.

## CURIOSITIES OF DENTISTRY.

MESSRS. EDITORS :—

We have been often amused with what might be called “the curiosities of dentistry,” among which are the following: Setting pivot teeth on atmospheric pressure—sending the size of the mouth in inches, over three hundred miles, for a set of teeth, and for complexion of teeth, saying, “to suit red hair and black eyes”—taking the close or “bite” of the mouth with a lump of wax stuck on the top of a segar box,—using gold foil, A No. 1,—extracting teeth by steam,—destroying nerves of teeth by steam,—drawing teeth by suction with a patent cork screw, or an instrument similar to it,—after excising the crown of a front tooth, to assert that the nerve stuck up “a foot,”—and a manufacturer of teeth to say, in a very laudatory circular addressed to the profession, that “*his teeth can speak for themselves.*” This we apprehend will be considered an undoubted improvement, or at least, decidedly new; but if this be the case, look out, Messrs. dentists, be very careful, or they will tell the lady, who perhaps has given you considerable trouble, what you said of her in your perplexity and excited feelings, while complaining of her exactness and peculiarities. Imagine their telling her, that you said she was “an old maid;” that she made you more trouble than she was worth; that “you hoped she would never come again,” or “that you did not want to be bothered with her.” Imagine all this and many more things they could say, and you will either decline using the teeth, or keep your mouth shut during the whole operation; or, if you must use the teeth, persuade the manufacturer to “stop their mouths,” or you will be for ever undone. Many more curiosities might be given, and we will, with your permission, furnish, at some future time, another batch.

Yours,

R.

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*Gold Pivots.*—We have usually inserted in the following manner. The pivot having been previously well fitted to the hollow screw within the fang, is mounted upon the tooth to be inserted: with a sharp instrument the whole of its exposed surface is cut up into numerous small barbs, opening downwards, then with a watch-spring saw, the pivot is split about one half its length; the two branches thus made, are slightly separated, yet so as to spring together by pressure. The edges of the top of the pivot is trimmed down with a file, so as to admit of its entering the cylinder, when it is forced to its place.

When thus mounted, we have never been troubled by teeth coming out, or being displaced. The *action* of the pivot is self-evident.—*Am. Jour. Dent. Science.*



# THE DENTAL NEWS LETTER.

JULY, 1850.

## ENLARGEMENT.

We have come to the conclusion to enlarge the fourth volume of the News Letter to one hundred and eighteen pages, thus adding eight pages to each quarterly issue. This will make quite a sizeable periodical, and we express a hope that the profession will exert themselves to sustain it nobly, by original communications.

Our course has been onward, as a retrospective glance will show.

The first volume contained but twelve pages to the number; then we enlarged the second volume to twenty-four pages, or twice the size of the first, and continued the third volume the same size as the second; but in the last number of the second volume we expressed our desire to increase the size of the third volume, and pledged ourselves to do so, providing we had evidence on the part of the profession, that they would sustain us in the enlargement, by contributing to its pages. We left the matter with them, but in consequence of a want of evidence on their part to supply matter, or an apparent lack of inclination to contribute, we deemed it advisable to continue the third volume the same size as the second; now, however, we will take the responsibility of enlarging, asking pledges of none, but fully believing that they will understand and appreciate our motives, and aid us manfully in carrying out our design, that of making the Dental News Letter a creditable and useful periodical, rendering it efficient in disseminating the truth—in giving all the improvements that are made from time to time, and of advancing the interests, and aiding in the work of elevating the dental profession to that position to which it is entitled, and which it is now fast approaching. These are our objects; and in carrying them out, we shall look earnestly—and we hope not in vain—for indications of interest in our enterprise. We hope to have it put in our power to issue the first number of the fourth volume—and indeed all the future numbers—filled with original articles of general interest.

In consequence of the enlargement, and believing the work abundantly worth it, we have come to the conclusion to advance the subscription to one dollar per annum. If forty-eight pages—the number in the first volume—were worth fifty cents, surely one hundred and eighteen—the number we design printing in the fourth volume—are worth one dollar.

OPENING ADDRESS BEFORE THE ALUMNI OF THE  
BALTIMORE COLLEGE.

BY E. TOWNSEND, D. D. S.

We have been favored with a copy of the above address, and have read it with pleasure and profit. There is a fervency—an earnestness, a warmth about it, much to our liking. The instruction given to the young members of the profession is good—very good. The liberal views entertained on all points, and the perfect absence of all selfishness, (that bane of the profession,) cannot be too highly commended; and we would that all manifested the same liberality with their professional associates as is expressed in the following passage, which is the only quotation we have room for:

“From duty to our patients,” (to which subject he has devoted considerable space, doubtless to great profit and usefulness to those just starting in the profession,) “I turn to the equally delicate subject of duty to our brethren. To them we owe justice, candor and courtesy; we owe it to them in their own right; and for the sake of a common effort and aim, we owe to all, as well as need from all, a frank and respectful interchange of kindly offices.”

---

*Treatment of the Dental Pulp preparatory to Plugging.*—As will be seen from the article under the above head, in this number, the author has completed the series. We have to thank him for his kindness in supplying a paper for each issue of our News Letter; and, that notwithstanding the pressure of engagements, he has taken the time to give to its readers many interesting facts, the result of long experience and close attention to the subjects on which he treats.

The articles evince much thought, many experiments, and a great devotion to the science of dentistry.

He will pardon us, we trust, in stating that each number of the News Letter will contain an article from his pen; in short, that he will continue a regular contributor.

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*Branch at Boston.*—In June last, we opened a branch of our establishment at 23 Tremont Row, Boston.

The wants of the profession in the Eastern States may thus be met, as it affords increased facilities in obtaining supplies, and we think the enterprise may be made beneficial to both parties,—the manufacturer and consumer.

We design keeping there a full supply of all articles needed by the profession, and invite their attention and patronage. We would be pleased to receive from that quarter any suggestions in reference to teeth, etc., and solicit communications for the News Letter.





Above we give cuts of the two faces of a beautiful medal just awarded us by the Pennsylvania Association of Dental Surgeons.

We desire to call special attention to the report of the committee on *premium teeth*, which will be found on another page, and which is very encouraging to us. We fully appreciate the trouble the committee took, and admire the plan they adopted to arrive at a fair and impartial conclusion.

We are satisfied that much has been accomplished, and think that more may still be done to improve the manufacture of artificial teeth; but while we have such incentives, such strong and flattering testimony, and by men fully competent to judge—we do not despair of making greater improvements; for, if increased efforts and a strong determination, with abundant facilities, will accomplish any thing, we have hopes of success.

We add the following additional testimony, which are brief extracts from letters.

“I acknowledge with pleasure, the faithfulness with which you have heretofore executed my orders, and for which you have my sincere thanks.

“You certainly manufacture the most beautiful and *natural* teeth which I have any where seen, and I feel that you are not only increasing your own reputation, *but my own*. Whilst you continue to give such eminent satisfaction, *my* prosperity cannot but add *something* to yours.”

H. S. CHASE, *Dentist*.

Woodstock, Vt.

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“I must now add my testimony to numerous others, that they approach nearest in appearance to the natural teeth, and are in my opinion the best now in use.”

C. PALMER, *Dentist*.

Warren, Ohio.

---

We have had manufactured a large quantity of casting cups or rings, for casting the metal models. They are made of malleable iron, therefore tough, and less liable to break than those made of ordinary iron.

We have had presented us a neat and simple little contrivance for winding springs. We have not tried it, but presume it may be made useful to the dentist who has time, and prefers making his own springs; but for us would be rather slow, as time is an object, to enable us to sell the article at the present price.

The inventor, Dr. B. M. Esterle, of Steubenville, Ohio, is entitled to credit for his invention, and he has our thanks for the specimen.

---

We were pained to hear of the decease of Dr. Thomas Pierce, of Havana, Cuba, and formerly, we believe, of Elizabethtown, N. J. He died at the former place, in June last, of cholera.

He was of generous impulses, open-hearted, and a steadfast friend.

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With this number we publish an index and title page for the first, second and third volumes of the Dental News Letter. Hereafter we shall publish an index at the close of each volume.

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From the Boston Medical and Surgical Journal.

### A NOVEL CASE OF ANEURISM—FROM MY NOTE BOOK.

BY A. C. CASTLE, M. D., NEW YORK.

The subject of the following singular and interesting case of aneurism, was the eminently distinguished artist, the late Mr. C——e. I had made for that gentleman a partial set of teeth, to complete the superior maxillary apparatus, in place of the absent organs. They were fitted to the mouth compactly, and had been worn without any inconvenience for several weeks, to the entire satisfaction of the wearer, when Mr. C——e was much annoyed by a small vesicle, which had made its appearance upon the lingual centre of the roof of the mouth, immediately upon the terminal edge where the gold plate formed the basis upon which the denticulation was completed. The vesicle gradually increased until it had attained a size double that of the following capital letter O. Its color presented a deep purplish hue, similar to the hæmorrhoidal tumor. The first instance of its appearance, upon examination, I conceived its character to be that of the ordinary "water blister," so common to this part of the mouth, caused by taking food too hastily into the mouth whilst in a hot state, or consequent upon a deranged state of the *primæ viæ*. An "astringent mouth wash" and an aperient medicine were prescribed. When the material change had taken place, as I have stated above, I was of opinion that the compression of the gold plate over the large surface of the soft texture of the gums and the roof of the mouth, had impeded the circulation of the blood, and had caused an enlarged varicose tumor. It exhibited no



pulsation, nor any other indicant than an *inert* and now pendant encysted blood-sac. With a pair of curved scissors I snipped off the sac, which was followed by a gush of blood, filling the mouth and fauces, almost causing suffocation; the patient not having been prepared for this contingency. The blood being emptied from the mouth, I found that it continued to flow *per saltum*, in a large full stream. I at once perceived that instead of a varicose tumor, as I had supposed, I had removed the aneurismal sac of a large artery. The diagnostic marks had been vague and undefined, and nothing characteristic warranted a different diagnosis and action upon an affection—never perchance met with before—the attendant upon an anatomical digression of rare occurrence. The patient, naturally enough, was very much alarmed. His mouth was constantly filling with arterial frothy blood, added to the apparent impossibility of getting at the artery to secure it; pressure having altogether failed to arrest the hæmorrhage.

I was fortunately enabled to overcome this seemingly formidable difficulty, with little trouble. While a student, I was engaged upon "a subject," dissecting the head and neck regions, tracing the relative positions of the arteries, nerves, veins, &c. &c. In so doing, I traced the anterior palatine artery passing through a hole in the centre of the suture of the palatine bones, whilst the *foramen incisivum*, or anterior palatine hole, was absent; which, as is well known, is found immediately behind the alveoli-palatine bones, between the two superior incisor teeth. I called the attention of Professor Mott, and Dr. Rhineland, Professor of Anatomy, to the circumstance. They informed me that they had met with one or two similar cases—of course of no further importance than (as in this case) the knowledge of this anatomical deviation from the usual natural design.

This anomalous affection, and its result, brought to my mind—which after circumstances proved to be correct—that the *foramen incisivum* was, in this case, situated in the centre of the palatine bones, and that either by mechanical pressure of the gold plate, or from some other cause, the aneurismal affection of the anterior palatine artery had been superinduced, and the pendant aneurismal sac formed. The indication was, of course to arrest the hæmorrhage. I proceeded to cut a piece of cork (*quercus suber*) into the form of the letter x, which I inserted into the end of the canula of a small sized trocar. I passed the mouth of the canula well through the orifice into the palatine hole, and with a blunt piece of wire, in the place of the trocar, pushed the cork into the desired position. It formed a most excellent *button plug*, and instantly stopped the bleeding. On the fourth day after its insertion, the plug came away, and the patient experienced no further difficulty or inconvenience.

*New York, February 12, 1850.*

RESEARCHES ON THE DEVELOPMENT, STRUCTURE,  
AND DISEASES OF THE TEETH.

BY ALEXANDER NASMYTH, F.L.S., AND M.R.C.S.

London : Churchill. 8vo., pp. 230.

This is an admirable work, and worthy of our warmest admiration. Totally different in its character from those puny compilations which are put together for the mere purpose of an advertising medium, we find here the results of a laborious philosophic and practical inquiry, by which the boundaries of knowledge are extended, by which human suffering may be relieved, and by which the character of the profession to which the lamented author belonged will be elevated. It is greatly to be deplored that he did not live to enjoy the fruits of his zealous, and, it is to be feared, too earnest labors, though the fatal illness to which he fell a victim, did not arrest his labors until he had completed the manuscript of this work. We find that it contains eleven chapters. The first is devoted to the general physiology of the dental system; the second gives an admirable description of the anatomy of the mouth and jaws; the third and fourth chapters include the descriptive, general, and minute anatomy of the teeth; the fifth comprises the development of the formative organs of the teeth; the sixth contains the minute anatomy of the dental capsule and pulp; in the seventh chapter, the development of the permanent teeth is described; in the eighth chapter, the teeth are considered as a test of age; and, in the ninth, as an indication of the progressive improvement of the human race. The much debated question of the mode of development of the ivory is discussed in the ninth chapter; whilst in the tenth and last chapter, the chemical composition of the teeth is given. Illustrations on wood and stone, admirably executed, greatly enhance the value of the text. The following extract will convey some idea of the variety of topics which are here treated, and the mode in which they are discussed.

*“On the structure and development of that portion of the epithelium which lines in the cavity of the mouth.—In the foetal subject, previous to the extrusion of the teeth, it forms on the alveolar arch a dense projecting layer, distinguishable from the surrounding membrane by its whiteness, and by the existence on its surface of ridges and sulci, having a waving course and a variable direction. The alveolar epithelium is thicker in proportion to the youth of the subject examined. It is most prominent where it corresponds with the molar teeth; its internal surface is concave, receiving the projecting mucous membrane. This disposition presents various objects for investigation. Firstly, as regards its composition: it is made up of a mass of scales, lying one on the surface of the other. This disposition shows that the*



terms 'dental cartilage, or the cartilage of the gum,' which have hitherto been applied to the structure, give an enormous idea of its true nature, for cartilage always presents the corpuscles discovered and described by Purkinje. As in other portions of the epithelium, the external scales here are the larger, and this holds good generally, until we come to the surface of the vascular mucous membrane, which presents simple cells with their corpuscles. In the interior of this alveolar epithelium, where it corresponds to the molar teeth, small vesicles may be frequently observed, varying in size from one-fourth to one-eighth of a line in diameter. They appear to the naked eye to be transparent; under the microscope their parietes are found to consist of attenuated scales, and their cavity to contain a fluid abounding in minute granules and cells.\* The internal surface of the epithelium, covering the alveolar arch, frequently presents concavities or indentations, which are from a line and half to three or four lines in circumference; they correspond to projections from the mucous membrane, formed by a larger species of vesicle. The latter is deeply implanted in the vascular mucous membrane. The parietes of the vesicles are composed of a very delicate membrane; they contain a transparent fluid, which coagulates on the application of heat or acid, or on immersion in spirit; and in this fluid float numerous globules and scales, similar to those of the epithelium generally. The *internal* surface of the alveolar epithelium also presents numerous fringed processes, measuring from one line to one line and a half in length, and half a line in breadth, which sink into the substance of the subjacent mucous membrane.....Although it contains no blood-vessels, the epithelium receives its nutrition from the blood circulating in the capillary vessels of the mucous membrane, and it follows from this circumstance, that if from any cause the blood should become morbidly altered in its qualities, the epithelium will suffer accordingly. Many of the appearances which the surface of the tongue presents under the influence of disease, and which offer to the medical practitioner so valuable a guide to diagnosis, are in reality nothing more than alterations in the epithelium, resulting from vascular changes in the papillæ of that organ. In like manner, the dental practitioner becomes familiar with morbid states of the epithelium of the mucous membrane of the alveolar arches and gums."

Valuable practical suggestions like that comprised in the concluding paragraph abound throughout the work, and render it not only interesting from its general character, but positively and practically instructive to all engaged in the healing art; whilst

\* The vesicles here alluded to are most probably those which Serres describes as glands for the secretion of tartar; they are very numerous, even after the extrusion of the incisor teeth of the calf, and are seen with great facility internally.

to those who practise that branch to which the author belonged, we consider the work to be as essential as it must be a valuable acquisition. Mrs. Nasmyth merits the highest praise for the very judicious manner in which she has performed the melancholy duty of placing the work before the profession.—*London Lancet*.

---

The original of the following we found in the "Scalpel," and took the liberty to alter it so as to apply to the removal of a tooth instead of a tumour.

### COGITATIONS OF A PATIENT AWAITING THE DENTIST.

Yes! I'll have it out! I will not suffer more  
From such a wretched, constant, mad'ning bore;  
Projecting from my gum, as if a quid of Indian weed  
Had found a lodgment there, for future time of need.

Out with it—yes! zounds! had I but *now* a knife,  
I'd out with it myself, and run the risk of life.  
The clock strikes two; where does that dentist stay?  
The ladies' are to ride!—he's gone out for the day.

But now I'll sit me down and attempt to read this book,  
Forgetful of that long-faced dentist's most mischievous look;  
But hark! who comes? 'tis he! methinks it scarce were sin,  
Softly to lock the door, and say I'm not within.

But, 'tis too late! here's for it! I sit in that *dread* chair,  
While he, with face all smiling, without a fear or care,  
Upon the table spreads with noise and much display,  
His lancet, hooks and forceps—a most dread array.

And smiling most benignantly, "now, sir, I'm ready if you  
please,"  
As if he were to carve a steak, he seemed so much at ease.  
"But, doctor, it do n't hurt *now*! I—I—guess I'll call again;"  
"No! No!" quoth he—"now is the time to ease you of your  
pain."

C-r-a-s-h! goes the knife. "Hold still! 't will soon be done;"  
C-r-a-s-h! c-r-a-s-h! "Mercy! how the blood does run."  
"Once more! hold still a moment, till I apply the key,"  
"And you, sir, pray keep still, and do n't take hold on me."

C-r-a-s-h! there! 'tis done! Reader, have you ever  
Suffered from an aching tooth, which put you in a fever,  
And caused you to be ill-natured, to fume, and fret and flout;  
If so, go to the dentist and have the monster out.



ASAHEL JONES. SAMUEL STOCKTON WHITE. JOHN R. McCURDY.

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“ Bicuspid.	
“ Molars.	
Pivot Incisors.	
“ Cuspidates.	
“ Bicuspid.	
“ Molars.	
Gum Incisors.	
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“ Bicuspid.	
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THE  
DENTAL NEWS LETTER.

A QUARTERLY PUBLICATION,

DEVOTED TO THE

INTERESTS OF THE DENTAL PROFESSION.

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VOLUMES IV. AND V.

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# THE DENTAL NEWS LETTER.

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[In consequence of the demand by dental students and some young practitioners, for a plain, concise and practical essay on mechanical dentistry, the following article was, at our request, prepared. The author is well versed in that branch, and fully competent to teach it.

We will take this occasion to say, that of all the letters of inquiry sent to us, more than one-half of them have been on subjects connected with mechanical dentistry, and it is no small tax to us, particularly in time, to answer them. We hope, therefore, that the following will relieve us to some extent at least, although we do not wish to cut off all inquiry, but on the contrary, desire to communicate to the extent of our ability.

To some it may seem like going back to the alphabet, or first lessons in dentistry, but to many it will be of much interest, and for those only was it written.—ED.]

For the Dental News Letter.

## MECHANICAL DENTISTRY.

BY T. L. BUCKINGHAM, DENTIST, PHILADELPHIA.

*Taking an impression in Wax.*—Select a cup large enough to leave a space of an eighth of an inch for the wax between the cup and the gum. Prepare the wax by softening before a fire, and working it in the fingers until it is soft enough. Fill the cup full of wax, giving it somewhat the shape of the gum, and using no more than is necessary. Put it in the mouth, standing behind the patient when the impression is for the upper jaw, and before when it is for the lower jaw. Put one hand on each side of the cup, and press it gradually up until the impression is nearly deep enough; then, holding the cup steady with one hand, press the wax close to the gum on the outside, and also to the roof of the mouth; now put one hand on each side of the cup, and press it up a little farther and the impression is complete. To remove



it, take hold of the handle of the cup and loosen it gently, and take it out of the mouth by turning it so that one side will come out first. Be careful not to let the lips bend the edge of the wax over into the impression. If, in loosening the wax from the mouth, the teeth have drawn the wax up around the impression of them, it can be cut off with a knife. Compare the impression with the mouth, to see if it be correct, and fix in your mind the teeth that are to be clasped, if clasps are necessary.

*Taking an impression in Plaster.*—Plaster impressions are taken of the upper jaw only, and where there are no teeth; for, if there are teeth, they would break the impression so much in removing it, that it would be useless.\* The cup should be of the shape of a suction plate. If such a one is not to be had, an ordinary cup can be substituted by building it up back with wax, to keep the plaster from running out. Make it as near the shape of the mouth as possible, only larger. Mix the plaster pretty thick, stirring it well while mixing, and pour into the cup, leaving it stand a moment, or until it becomes so stiff that it will build up without settling down. The patient should have a napkin spread over the breast to protect the dress from any plaster that might fall, with the head inclined forwards to prevent the possibility of any of the plaster going down the throat. Get the plaster into the mouth as gently as possible, and press the cup gradually up until the impression is deep enough, and hold it there until the plaster sets, which will be from three to five minutes.† It can be told when the plaster is hard enough, by trying what hangs over the edge of the cup, or what has been left in the vessel the plaster was mixed in. When it breaks short, or has lost the sticky feel, it will do to remove it from the mouth.

Plaster takes a much better impression than wax. The wax, when pressed up, will slide over the roof of the mouth, which

\* There are some who succeed in taking an impression of the lower jaw in plaster; and also, in taking impressions where there are teeth remaining in the mouth; the latter they accomplish by breaking the impression in the mouth, and connecting the pieces afterwards by cement.

† The plaster will harden sooner by mixing it with salt water. This will do in taking impressions, but will not answer for casts, as it makes the plaster crumble.

often spoils the impression; and, again, it often sticks to the mouth, and is difficult to remove, or the edges will be curled over in removing it from the mouth; but none of these objections will apply to plaster, excepting that the edges may be broken in removing it; but these can be replaced and made perfect by using a little cement.

I am satisfied that, if the mode of taking impressions with plaster be once adopted, it will not be abandoned, at least not to go back to wax. Out of a number of cases I have never failed to make a good fit when I took the impression in plaster.

*To make the Plaster Cast.*—Take a strip of sheet lead, such as is used for cutting patterns, or a piece of paper folded three or four times, leaving it some two inches wide, and a foot or more long. Set the wax impression after oiling it, on the table, and fold the strip of paper around it, and so shape it that the cast will be largest at top;\* mix the plaster just thick enough to flow into all the indentations in the impression; then with a knife or spoon, drop a small quantity into the impression, commencing at the roof of the mouth, letting it flow down gently, filling up the impressions of the teeth, when the balance may be poured in from the cup until you have the cast from one and a half to two inches thick. Let it stand until the plaster is hard enough to keep its form, then remove the band and let it remain until perfectly hard. The wax can be removed by first cutting it away, so as to free the edge of the cup all around, then by running the point of a knife between the cup and wax, the cup can be forced away, leaving the wax on the cast. Then hold the wax to the fire until it is quite soft, and holding the cast in one hand, bend the wax up in front until the surfaces of the teeth are exposed, then cut the wax away until the teeth are all free, then the large portion of wax in the cavity of the cast can be removed in a lump. The cast should now be trimmed, so as to draw readily from the sand. If the front of the cast, or the teeth on one side should project, there must be left a corresponding fulness on the opposite side; or, that a line drawn lengthways with the teeth in front, and one drawn on the opposite side of the cast would diverge as they go from the teeth to the top of the cast.

\* In taking a cast from a plaster impression, allow the impression to become perfectly dry, then oil it, and cast as described for wax.



If the cast is not perfect around the teeth, it must be trimmed until it is so. Of course, the object is, to have a perfect model of the mouth. It is well to varnish the cast with some spirit varnish; I prefer a varnish made by dissolving gum sandrach in alcohol, as it leaves the cast almost white, and penetrates farther into the cast, thereby making it harder than the shellac varnish, which is generally used.

If the points or edges of the teeth are closer together than their necks, the space should be filled up with wax until the sides are at least parallel. If it is designed to fit a cavity plate, the wax for forming the cavity should be put in after the cast has been varnished, as it sticks much better on the varnished cast; and it can be varnished also.

*Moulding in Sand.*—Take some of the finest casting sand,\* just moist enough to hold together; fill a small vessel, say a common tin cup. If it is too wet, the hot metal when poured into it will cause so rapid an evaporation of the moisture as to make the metal boil; and if too dry, will crumble when the metal is poured in, either of which would spoil the cast. Screw an ordinary stump screw into the top of the cast, and press the cast, teeth down, into the sand, then pack the sand around the cast, until the sand is level with the top of the cast; now take hold of the screw with one hand, and with a small hammer in the other, tap the shank of the screw gently, so as to jar the cast in the sand, and turning the cup around, striking the screw on several sides, until the cast is loose, then lift it up slowly and carefully, tapping the screw in the meanwhile, until the cast is out of the sand. If the sand has drawn up around the teeth, brush the sand off the cast, and replace it in the mould, going through the operation as before, and if necessary, repeat, until the mould is perfect. If a little loose sand should fall into the mould, it can be turned up and the sand blown out. The sand should not be packed too tight, but have it sufficiently porous to allow the vapor to pass through it.

*Making the Zinc Cast.*—Melt a sufficiency of zinc, and when it has just melted take an old knife, or something similar, and

\* We have noticed that common whiting has been used instead of sand with good success.

skim off all the dross; let it stand until it begins to harden, or stick to the sides of the ladle, then pour it into the mould, beginning at a part of the mould where it is not required to be perfect, for fear of the metal washing the sand, continue to pour gently, with the ladle close to the sand, until the mould is full. Let it stand till the metal is hard, then remove it and cool in water. If the cast is not perfect around the teeth, the superabundance can be cut away with a coarse file and graver; and if necessary to separate the teeth on the zinc cast, it can be done with a small saw, such as carpenters use for sawing circles. The zinc cast should of course be a fac-simile of the plaster model.

If a zinc cast has been properly made, it will be as bright and smooth as a piece of silver plate. If the zinc be poured too hot it will boil, though the sand be in a proper state.

*To make the Lead Cast.*—Put the zinc cast into a cup or ring, with the teeth up, and with a small quantity of sand under it, to make it set steady; then fill the cup with sand, and pack it down, until it is three-quarters of an inch above the teeth, then cut the sand out with a knife, until all the parts of the zinc cast, where the plate is to fit, are exposed. Where the plate curls over the gum, the lead cast should be thick, but it need not run farther down on the zinc cast than the plate is to go. If the lead cast be too deep, it makes it more difficult to swedge the plate, and the plate will stick in the lead, and be bent in getting it out. Melt the lead in another vessel than the one in which the zinc was melted, for if but a small portion of lead be mixed with the zinc, it will spoil it for future use. Pour the melted lead over the zinc cast as prepared, and in a few minutes remove them and wash clean, and knock them apart with a hammer, and all is ready.

*To make a Plate.*—Take some thin sheet lead, and by pressing it down on the cast and marking and cutting out, get a pattern of the size the plate is desired, then spread the pattern out, and lay it on the plate, and mark and cut out; anneal the plate by heating; now, with a pair of plyers, or bending plate forceps, and a small wooden mallet of suitable size, fit the plate, as near as possible, to the zinc cast, then put your casts together with the plate between them, and strike the zinc cast lightly with a hammer, then take them apart and see if the plate is in its proper



position, and repeat, striking the cast a little harder, until the plate is nearly up, when, with two or three smart blows, the plate is made to fit the cast accurately.

In swedging a plate be sure to get it started aright, and it may be necessary to anneal it two or three times during the operation, and also to file away a little if it should bind too tightly in any place. When the plate fits the zinc cast, it should be tried on the plaster cast to see if it fits it also. Then bend the clasps with a pair of round nosed plyers to fit the teeth as near as possible, particularly around the necks of the teeth where they are to be soldered to the plate, and file the plate away to allow them to go down between it and the teeth; now arrange the plate and clasps on the plaster cast, and stick them together with some wax or cement, then lift them carefully from the cast, and set them on a piece of charcoal, then pour some mixed plaster over the ends of the clasps and under the plate; when it gets hard remove the wax, and if there is any place where the clasps stand off from the plate, fill it up with scraps of gold; now coat the places, or joints, where the solder is to flow, with borax, and lay on the solder and melt or flow it; when it is cold try it on the zinc cast, and fit the clasps up to the teeth with a small hammer, then remove and file the clasps and plate to the shape they are to be, then put the plate on the zinc cast, and, after cutting away the lead cast so as not to drive the clasps down too far, put them together and swedge the plate up again, and see that it fits the plaster cast. The plate should now be boiled in some diluted sulphuric acid, for a few minutes, to remove the fire coat, and, after washing it, stone up and polish the plate. Some do not polish till after the teeth are soldered on, but I think much time is saved by polishing at this stage of the operation, as it can be done so much more quickly than when the teeth are on. Now try the plate in the mouth and make it fit perfectly easy. Cut, file and bend it, if required, till both yourself and patient are satisfied.

It is very important that we should have the confidence of the patient, and this can generally be secured by giving satisfaction, and also by making all necessary explanations.

When the plate has been properly adjusted, take the close of the mouth as follows: Put the plate on the plaster cast, and

arrange wax on the plate where the artificial teeth are to go, leave the wax longer and fuller than the artificial teeth are to be, then put the plate in the mouth with the wax on it, and have the patient close the mouth naturally, and if there are natural teeth in the opposite jaw which antagonise with teeth in the jaw you are fitting, let the mouth be closed until they come together. If there should be no natural teeth to articulate, some hard substance had better be put into the wax to keep the patient from biting too far into it. Notice, that in closing the mouth, the under jaw has not been projected or twisted laterally, but that it has been a natural close. As patients are very apt to project the lower jaw in closing the mouth, a good plan to prevent it is, to put the hand against the lower jaw, and press backwards as the jaw closes. If the close has been correct, mark the exact centre of the mouth, and remove the plate and wax, and select a tooth for shade.

*To make an Articulating Cast*, place the wax with which the close of the mouth was taken and plate, on the plaster cast, and fill up the roof of the mouth even with the points of the teeth, and nearly as far back as the back of the cast; then cut a V shaped groove down the back of the cast, and oil it well, so that the articulator will not stick to it; then mix some plaster and drop it into the impressions of the under teeth, and let it flow down the back of the cast, filling up the groove; then make the plaster thick enough to build up with a knife.

The articulator should be about half an inch thick on the top and back. When the plaster has set, it can be trimmed off, and the casts taken apart. When the plate and wax are removed, and the casts put together, we have a fac simile of the mouth when closed.

The teeth may now be selected to suit the case; the shade tooth and articulating cast will be sufficient guides in their selection. To grind the teeth to the plate a grinding machine of some kind is necessary, with several sizes of emery wheels. I prefer a small lathe, as it best answers to polish plates. Put the plate on the cast, and commence to grind the teeth to fit. If it is intended to run the necks of the teeth over the plate and press upon the gum, the cast should be scraped away about the thickness of a five cent piece; if, however, the gum be very soft or spongy, it may be scraped even further. The teeth should be ground to fit



the plate, and the neck-press upon the cast, allowing sufficient projection to clear the under teeth. The necessary projection and length will be ascertained by putting the casts together, as the teeth are ground to suit, they must be attached to the plate in their proper position with cement. (Cement may be made by melting beeswax and rosin together.)

Another and quicker way to grind the teeth, is to build up some wax on the plate, and arrange the teeth around on the wax, but as we cannot see the back of the teeth for the wax, we have to grind by guess, and often leave a space between the base of the teeth and plate.

When the teeth have been ground and properly arranged, remove the plate and teeth from the cast, and set them on a piece of charcoal, then mix some plaster and sand, about equal parts, and pour it around the teeth, and let it flow under the plate; when the plaster is about half way up the front of the teeth, put a piece, or two or three pieces of stiff iron wire, twisted together, around the front of the teeth, so that if the plaster should break in heating, the teeth will not be drawn out of place; then build up the plaster until the points of the teeth and the clasps are covered. The plaster should be about half an inch thick. If there be too much plaster it will take an extra heat to solder the teeth, and if too little, it is liable to break before the teeth are soldered. When the plaster has become hard, the cement that held the teeth to the plate can be removed, and the stays put on the teeth.

In putting the stays or lining on the teeth, take a strip of gold—if a gold case—of suitable width, or nearly as wide as the teeth, and stand it up against and along the back of the tooth, and file the end if necessary to fit the curve of the plate to which the lining is to be attached when soldered, move it sideways against the lower pin of the tooth, and it will be marked where the pin comes, then with the punch forceps, punch a hole for the pin, then put it back again with the pin in hole, and move the strip as before against the upper pin, by which you get the spot to punch the other hole; see that it fits the tooth after filing off the metal which the punch has driven through, then countersink the holes on the outer surface, and cut the lining off the proper length. I generally leave the lining large enough to cover nearly the whole surface of the tooth. In punching the linings, punch always from the side that goes next the tooth.

For the Dental News Letter.

## BRIEF REMARKS ON ODONTALGIA,

*Its Varieties, Treatment, and the Destruction of the Dental Pulp.*

BY GEO. J. ZIEGLER, M. D.

*Messrs. Editors,*—The few subjoined and hastily written remarks, slightly modified, for obvious reasons, were elicited in answer to a request by a practicing physician in the South, for information with regard to the treatment and destruction of the dental pulp. Thinking that they might be made more generally useful, and as an appendix (if I may claim so high a character for them) to the excellent paper of Dr. J. D. White, in your last number, I transmit them to you. If you should consider them worthy of insertion in your valuable Journal you are welcome to them.

The best mode of treating nervous irritation, either of a primary or secondary character, in any part of the system, in the teeth particularly, is on the principle of *ubi irritatio ibi affluxus*, and, of course, by allaying the first, the second is prevented, retarded or arrested, and in consequence generally subsides in a great measure.

Odontalgia may depend upon, or result from various conditions. 1st. It may be purely inflammatory, and confined to the interior of a tooth; 2d. Neuralgic, which may be either of a local—limited to the part—or of a sympathetic origin; and 3d. There may be a pseudo-odontalgia, viz: periodontitis.

The two former are generally treated similarly, viz: 1st. Allay the excitability or irritability of the nerve by anodynes, the best of which are aconite, morphia and chloroform; and 2d. Remove the superabundant blood from the vessels by means of astringents, the best of which is tannin; or, which is still better, combine the two, anodynes and astringents. This combination of tannin with the vegetable alkalies would seem to be objectionable from their incompatibility with each other, yet in practice I have not found their properties destroyed on this account, but have obtained very speedy and beneficial results from them; the compound of tannin and morphia, particularly the one most generally employed. In the third, viz: periodontitis, in addition to these, scarification



of, and leeches applied to the gums, with counter-irritation in the vicinity of the disease, and occasionally in violent cases catharsis will also assist in, and be often, of themselves, adequate to the cure.

The utility of the destruction of the nerve, or pulp of the tooth, is denied by many, but, in my humble opinion, without just cause, for we have a precedent in nature in the vegetable kingdom, the teeth bearing somewhat the same relation to the animal body that vegetables do to the earth. Thus, for instance, you will often find the whole interior or medullary part of a tree or plant destroyed, yet they will continue to grow and flourish for years afterwards, being supported by the nourishment afforded by the exterior surfaces or vessels, they in fact being generally the capillaries or nutrient vessels; the interior or central hard portion of many vegetables being analagous to the bones of the animal system, hence assisting materially in their support.

And again, to come more directly to the subject under consideration, the pulps of the teeth are frequently destroyed by a variety of causes, yet it does not necessarily occasion a loss of them, for they often remain healthy, and are useful for years subsequently.

In the same way, in the destruction of the nerves of the teeth we choose the lesser evil, viz: either to extract, and thus sacrifice them altogether, or destroy part of their life by cutting off the nutrient supply to their interior, and in this way and condition retain them.

One of the greatest objections to the destruction of the dental pulp is, that there is subsequently, from the greater periodontal demand, and hence increased vascularity, a direct tendency to periodontitis which frequently terminates in suppuration and alveolar abscess, with the occasional production of a sac on the extremity of the root or roots of the tooth, which becomes filled with pus, and if this can be discharged by the formation of a passage through the bone, &c., to the surface of the gum, or sometimes exterior of the face, through a fistulous orifice, it will be relieved for the time, and all the violent symptoms subside, but only temporarily, for from the slightest exposure the inflammation, which is only passive or subacute, will again become active, and with the same result, or even increased to such an extent that, from the pain and discomfort of the thing, the tooth is ultimately obliged to be sacrificed. By proper precautions,

however, this result may be prevented, viz: 1st. By destroying or allaying all sensibility or irritation before the application of the escharotic by means of anodynes and astringents; and 2d. Before the narcotic and other influence has passed off, removing every thing previously from the cavity, cleansing it out perfectly, even to the exposure of the pulp if possible, by applying a compound of anodyne and caustic.

The best escharotic for the purpose is *arsenious acid*, prepared by rubbing it up thoroughly with *oil of origanum*, adding either *aconite* or *morphia*, so that there will be a complete admixture of the caustic with the anodyne; the oil acting as a vehicle, although it is said of itself to be useful in odontalgia.

This is the general course and treatment which I pursue in treating and destroying the dental pulp, &c., though with, or in place of the morphia which is generally used, I frequently add or substitute aconite, it being a more direct and more powerful sedative, and also probably not being so incompatible with tannin as morphia.

Dr. White, however, it will be observed, uses morphia as the anodyne, and creosote as the vehicle; but the latter is of itself so disagreeable as to be objectionable, and as it is used only as the medium, we would preferably resort, as we do in exhibiting our remedies internally, to something more pleasant and aromatic, which properties the origanum possesses to a great degree.

In my own practice I differ from Dr. White in some respects, believing that I get better results, but in the main his is the best that I am acquainted with, in fact my own being based upon his, and from whom I gratefully acknowledge the reception of my first correct impressions upon the treatment of the dental pulp.

In the first place, if I can have the patient under my charge, after cleansing out the cavity as well as possible, I introduce a narcotic such as aconite (the concentrated tincture of aconite for instance) or morphia, and, if it is complicated with inflammation, tannin; at the same time closing the cavity with wax. After this has been in long enough to narcotize the pulp, from a half to two or three hours for example, I remove the wax, &c., and cleanse the cavity, then introduce the caustic compound with an additional quantity of the anodyne, closing the cavity as before, and allow it to remain in from three to six hours, when I remove



it, and, if possible, the dental pulp also; if this latter is not practicable, the cavity is permitted to remain open for the escape of the sloughing pulp. If there should be any tendency to periodontitis, I re-introduce the anodyne and astringent; and also, if necessary, scarify the gums to correct and subvert this tendency, and prevent the inflammation, &c.

The force of the objection to the use of wax over the cotton to close the cavities, does not seem to be sufficiently great to prevent its use, as it can be easily obviated by the manner of introduction. And, again, it would appear to be better than to leave the cotton exposed, which will absorb the poison, and if it will escape sufficiently to act on an adjoining tooth, it most certainly will to be diffused throughout the mouth and thus introduced into the stomach; therefore, as a means of avoiding the possibility of such an occurrence, the use of such substances would be preferable.

In most cases I do not fill the tooth for one or even several weeks subsequently, or until all the tendency to, or periodontal inflammation has disappeared.

It will be observed that I do not leave the caustic preparation in so long as Dr. White, my reasons are that I do not find it necessary, as I use a larger quantity of the escharotic and narcotic, and hence destroy the nerve or pulp in a shorter time, on the well established principle that small quantities of these remedies act more as an irritant or excitant than as an escharotic or sedative, just the same as if they are used on any other surface of the body. Thus, for instance, if a small quantity of arsenious acid be introduced into the stomach, it will irritate and inflame the mucous membrane, which may ultimately terminate in destruction and disorganization, accompanied with prolonged distress, &c.; but if a large quantity be applied to mucous or other surface, the death of the tissue is rapid, without the intermediate stages, or if so, of very short duration, thus producing the disorganization of the part in a comparatively short time, without prolonging the accompanying pain and distress. And again, large quantities destroy the vitality so rapidly, as to retard and frequently entirely prevent absorption, whilst small quantities are more readily absorbed. In the time above mentioned, the preparation should be removed with the pulp if possible, as the destruction may proceed so far as to cause the immediate or ultimate loss of the tooth.

Arsenious acid is however not strictly an escharotic, as will be seen on referring to the U. S. Dispensatory, page 22, in which it is stated that "*Arsenious acid, when it produces the death of a part, does not act, strictly speaking, as an escharotic. It destroys the vitality of the organized structure, and its decomposition is the consequence. The true escharotic acts chemically by decomposing the part to which it is applied, and the loss of life follows.*"

In the majority of instances, however, you cannot have the patient at your disposal, therefore more caution must be exercised in the use of escharotics, and the better plan in such cases will be, after cleansing the cavity well, to introduce a larger quantity of the anodyne, but not so much of the caustic, and sometimes but rarely the astringent, and then close the cavity carefully with wax, at the same time requesting the patient to remove it in six or eight hours under the penalty of losing the tooth, cleansing it and the mouth perfectly, reintroduce the wax, and come to see you the next day. This will depend somewhat upon the intelligence of the patient with whom you have to deal; sometimes it being sufficient merely to remove the wax, &c., cleanse the mouth, &c., without any more attention. In most of such cases, however, the quantity of the caustic should be graduated to prevent the possibility of subsequent injury from the ignorance or carelessness of the patient.

The period of the day for the institution of this treatment, as Dr. White properly remarks, is of great importance, the morning being preferable. Thus applying the anodyne and astringent at night, and early the next morning the anodyne and caustic.

The development of the teeth is another very important point with regard to this operation. If they are not fully formed, the attempt to destroy the pulp should never be made, as periodontitis is almost a certain result, and of course, in consequence, the subsequent loss of the organ operated upon. In many such, and in all cases where it is not advisable to destroy the nerve, yet it be desirable to retain the tooth, if only for a very limited period, the anodyne and astringent will generally palliate and frequently cure.

There are also other things to be taken into consideration respecting the modifications of the above mentioned course of



treatment, viz.—the age, sex, temperament, &c., which are so obvious as to be scarcely necessary of mention, yet are so important as to require special attention.

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For the Dental News Letter.

### EPULIS.

*Messrs. Editors:*—The disease known as Epulis, derives its name from its position upon the gums, and not from any peculiarity in the structure or appearance of the morbid growth. Tumors essentially the same occur in other parts of the mouth, with this difference only, that they take on in some degree, the appearance of the tissues in which they are located. Of the various causes giving rise to this affection, we can only say, that they are but imperfectly understood, for while some may be readily traced to the irritation caused by a diseased and dilapidated condition of the teeth, other cases occur, which after the closest scrutiny we are forced to attribute to some peculiar idiosyncrasy of which we know nothing, any attempt therefore to classify the different varieties according to the causes from which they spring, must necessarily be defective. The most common variety is that which presents a soft and fungoid appearance, occupying a position upon the gums, between the teeth, or sprouting up through the pulp cavity of a decaying root. This form may be appropriately denominated fungous of the gums, and occurs most frequently where there is a tendency to a relaxed and spongy condition of the gums, it is usually found to depend upon local irritation for its existence, and this suggests the treatment to be pursued.

One of the most obstinate diseases to which the gums are subject, is a tumour similar in appearance to the one last named, but distinguished from it by a disposition to ulcerate and bleed, discharging a fetid ichor, and accompanied with pain of a lancinating character. This is true cancer, and calls for extirpation with all the parts to which it has formed attachments. A third variety, which we shall mention is a tumour much firmer in structure than either of those already noticed; it is distinctly fibrous, and most frequently originated within the sockets of the teeth, though by no means confined to them. It is a fibrous tumour of the bone or periosteum, and may be met with on either the superior or inferior maxillary bones, occasionally on the

palatine processes of the former ; its fibres are most dense at the centre, and not unfrequently show a disposition to ossify, while towards the circumference it presents a soft and lobulated appearance. This variety is found to appear without any appreciable cause, and may degenerate into malignancy. The fourth and last variety of Epulis we shall notice, is decidedly malignant, though fortunately of rare occurrence. In its first stages it is but slightly vascular, with a rough and indurated surface, accompanied with acute lancinating pain. It sometimes remains in this condition for a number of years before it assumes its most alarming aspect, but sooner or later the bones become carious, the tumour softens and is interspersed with fungi, a fetid, purulent and bloody discharge is set up, the constitution gives way, and death puts a period to the sufferings of the unhappy victim. Epulis may be readily distinguished from affections of the gums produced by the use of mercury, from scorbutis, or ordinary inflammation of the mouth, by a well defined line which marks the growth as foreign, no matter how intimately connected with the gums it may be, whereas in the latter conditions the tumefaction resides in the proper substance of the gums. Another distinguishing mark is the resistance they offer to the means ordinarily employed to subdue inflammation. Epulis may be originated within the alveolus of a single tooth, or a number of teeth, and this too while the teeth are in situ and perfectly sound, as the history of the following case (of which the writer was the subject) will show. About the middle of the year 1848, I discovered a recession of the gum from the neck of my second left inferior molar, and supposing that the presence of caries on the buccal surface had induced the gum to recede and ulcerate, I submitted my mouth to the inspection of a dentist, but failing to receive any satisfactory information from him, it was suffered for a time to take its own course. Some months afterwards, the breath became offensive, which led to the discovery that one or more fistulous openings had formed between the roots of the tooth and alveolus through which was constantly discharged a thick, and apparently laudable pus, which occasioned a fetor when allowed to remain in the mouth for any considerable length of time. The supposition that the tooth was carious, proved to be erroneous ; it was perfectly sound, and to all appearance healthy. It now became loose and



longer than any of its neighbors, which I very naturally attributed to inflammation and thickening of the periosteum investing the roots, but in this I was again mistaken, as will be seen in the sequel. The difficulty in forming a correct diagnosis may be attributed in some degree at least, to the fact that the tooth was in my own mouth, and farthest posterior, which placed a thorough examination on my part, entirely out of the question. The process of mastication now became painful; eat as I would, the troublesome tooth was constantly coming in contact with its antagonist before the others met, and this was followed by intense pain, which gradually subsided to be renewed again at the next occlusion of the jaws; the pain differed from toothach in that it was deeper seated in the jaw, and of a peculiar gnawing description, occasionally lancinating, but entirely free from the throbbing sensation attending an inflamed pulp, or the formation of alveolar abscess. With the aid of a mirror and strong light, I made a final effort to find out the cause of the trouble; the soft parts around were exceedingly sensitive, and in addition to the pus which oozed from between the tooth and socket, blood came freely on the slightest touch, and now for the first time I discovered the presence of two small tubercles which appeared to have sprouted from within the alveolus. This at once revealed the character of the disease, and determined me to have the tooth immediately removed. The operation was performed by my friend and neighbor Dr. Parry, who, after luxating the tooth, laid it over to one side by lateral pressure, and fortunately for me, by this means bit out, as it were, the entire morbid growth between the roots, to which it firmly adhered. It was found to occupy the entire space between the roots from their apices to the point of bifurcation, and bulging out on either side, it almost surrounded the tooth, sending up prolongations which appeared above the gums. It belonged to the variety previously designated as fibrous, the hard and fibrous portion occupying the centre, while outwardly it presented a beautiful lobulated arrangement, of a pale pink color, not unlike one of the salivary glands. The artery by which it was supplied was of considerable magnitude, and the hemorrhage which followed, profuse; the parts from which it was removed speedily took an healthy action, and no indications of a reproduction has since appeared.

J. McCALLA, D. D. S.

Lancaster, Pa., Oct. 1, 1850.

For the Dental News Letter.

## OBTURATORS.

*Messrs. Editors:*—Notwithstanding the antiquity of the date of the first construction of palatine obturators and all the multiplied improvements and ingenious contrivances which have been made, down to the present day, still all does not suffice to relieve or meet the varying circumstances and inconveniences arising from the fissures or perforations of the palatine arch, or floors of the maxillary sinuses, without involving in their turn or use, some evil consequence to adjacent parts, or annoyance to the patient. Therefore, not a grain of experience or information, attained by any one laboring in the field of professional usefulness, should be withheld from those winged messengers that make their periodical visits throughout the land—the journals.

In view of this, allow me to communicate through your valuable journal, a description of a small instrument, which is being used successfully as an obturator, in a circular opening or foramen in the roof of the mouth, or palatine arch. I will style it, for convenience of description, a *stud*.

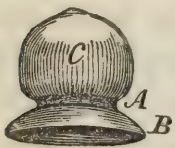
First obtain an impression of the palatine arch with wax, as if a plain plate only were to be fitted over the orifice in the ordinary way. Then stamp a thin plate of gold, with metallic castings, to extend beyond the margins of the orifice about a quarter of an inch in every direction. When this plate is fitted against the palatine arch, a ball of white wax or cement is attached by heat to the convex surface of the plate, sufficiently large to fill the orifice or fissure,—as the case may be,—and long enough to reach through the orifice and be on a level with the plane of the inferior naries, and in such a position as to allow the plate to fit perfectly to all the parts. Now make a cylinder of gold exactly the size of this piece of wax, and solder it to the plate in the same position the wax occupied, and then tried in, to be sure of all being right thus far. When this is accomplished, place upon it another cylinder or air chamber, the shape of a partially flattened bullet, and as much larger than the first one, as the orifice can be enlarged by gentle pressure. This second cylinder is now soldered to the top of the first, and when the instrument is properly polished, it is ready for use.

The whole presents a similar appearance to a common door



knob, with a light projecting rim from the neck. When this knob is pushed through the opening, the elasticity of its margins will cause it to contract up to the neck of the stud, and have the effect of holding the plate against the palatine arch, and the knob against the floor of the nares, and effect so complete a closure of the orifice, as to prevent the possibility of any substances of food, or even air, escaping through. If the instrument is constructed of light material, it will not exert sufficient pressure to produce absorption of the upper margin of the orifice; and as it is not expansible like the sponge, it will not enlarge the opening by direct lateral pressure, and as it does not leave the *cul de sac*, as does the plain plate, merely fitted over the opening, or absorb the mucous and fluids of the parts, as the sponge, it does not require to be removed so often as those appliances, and thus in a great measure is the liability to enlargement of the orifice avoided by not demanding a renewal, or removal for the purpose of cleansing.

The general methods known to the profession, for securing these contrivances, are to fasten them to the teeth of the superior jaw, or by spiral springs to the inferior, but, from the rapid destruction of the teeth, in most cases, by bands, those methods are objectionable, and should always be avoided if possible: for when the teeth are gone, the same thing must be done, that should have been done at first, and when, for want of teeth to support the contrivance, the case is abandoned as hopeless.



a. The neck.  
b. Platina plate.  
c. The knob.

The case which the accompanying cut represents, is one where bands had been attached for many years to the superior teeth, until all were destroyed excepting the incisors and cuspidati, which would not support the plate. Then the sponge was used, which answered but imperfectly, and was uncleanly and disagreeable, in many respects. This contrivance has now been worn for nearly two years, and does not seem to excite absorption of the margins of the orifice, neither do I think it will, as there is no pressure laterally when the instrument is in its place; and it is not found necessary to remove it every day for the purpose of cleansing.

The lighter this instrument can be made, the better; for, if the

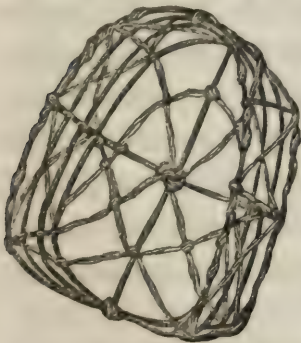
plate which covers the roof of the mouth fits properly, it will remain by atmospheric pressure, and thus avoid any downward tendency.

J. D. WHITE, M. D.

October 2, 1850.

### PREPARING PLATES FOR SOLDERING.

After the teeth have been suitably ground, and arranged to suit the mouth, being well cemented on the plate with beeswax, having a little rosin mixed with it to prevent the moisture from loosening them, a basket made of annealed iron wire, about the size of a small knitting needle must be had, of a suitable shape to receive the plate with the teeth all on. A piece of waxed muslin for the bottom, and a strip for the outside of the basket being placed tightly around, the basket is to be filled with plaster and sand of suitable proportion. Wet up rather thin, and the plate, with the teeth carefully stuck on, is to be inserted in the mixture so as to properly cover the teeth and plate, after trimming, warm slightly, and remove the wax, then dry evenly, and after that fit the lining to the teeth, letting them remain firmly in their place. To fit the linings with ease, cut the gold in a strip, put a little beeswax on one side, and press it against the pins to show where to punch the holes; cut off the lining, fill it to shape, countersink the holes, place it on the tooth, cut off the pins nearly even with the face of the lining, and with a small wedge shaped chisel, split and spread the heads of the pins; to fasten the lining to its place when the work is soldered and allowed to cool, place



it slowly in water to soften the coating, when the plate may be removed, and the basket saved for further use. The accompanying drawing shows the form of the basket which may be made open in the centre if desired for the under plate, but I think it best to have the wires extend across the inside, as shown in the drawing.

Such, gentlemen, is my experience; I give it cheerfully to the profession for their consideration. Yours respectfully,

CORYDON PALMER.

Warren, Ohio, July 15th, 1850.



For the Dental News Letter.

## CURIOSITIES OF DENTISTRY.

*Messrs. Editors:*—In continuation of the above subject, permit me to give you a few more items.

A professional friend from the South told us the following:—

A gambler, in following his profession, chanced to come across a dentist, and after winning all his money, offered to play for his case of instruments, which was agreed to, and resulted in the dentist losing them also. The gambler shortly after met with more than his match, and lost all he had but the instruments. With these, however, he determined to try his luck at dentistry, and pushing along to a small town, probably in Alabama, took a room and hung out his “shingle.” A couple of days elapsed before he had a call; but he concluded “things would take a turn soon,” and soon they did; for on the third day, a negro came in a great hurry to his door, with a message for the “Dentist” to come to Mrs.——. He rolled up a few extracting instruments, and presented himself at the appointed place, when he was requested to examine a tooth in a young ladies’ mouth; being told it had ached very badly, and they wished him to advise what should be done with it. We must here say, in justice to our hero, that he was a man of good education and fine address, and had all the appearance and manners of a gentleman. He proceeded accordingly to examine the tooth, and found it to all appearance, a sound, healthy organ. He was completely at fault, and did not know what to say, and endeavored to the best of his ability to think of the word “*enamel*.” He felt, as he afterwards expressed it, “*like a cat in a strange garret*.” The lady was awaiting his opinion with all anxiety depicted on her countenance. When, finding that he must say something, he blurted out, “Why, madam, the tooth has lost all its “*animal*.” This he declared was the nearest he could come to it, and that it was his first and last case, as he quitted the profession immediately afterwards “in disgust.”

Another case is that of a gambler and dentist combined; but losing all his money, sought a purchaser for his instruments. He came across a rough fellow, a carpenter; and after praising his fine developments, and assuring him he had just the right kind of a head for a dentist, succeeded in selling him the case at

about double the cost, and left him by saying, "No study is necessary to become a dentist ; push on and you will succeed."

Push on he did, and the first case he had was that of a man who had a tooth diseased at the fang ; after examining it, he told his patient that the tooth had a *worm* in it ; and to prove his diagnosis correct, he recommended its extraction at once, which the patient submitted to, and the tooth was removed ; after which the dentist split the tooth and exhibited the nerve, which he called a worm, in proof of his assertion. The last we heard of him, he was endeavoring to discover a *vermifuge dentis*.

A lady leading a child by the hand called upon a dentist of my acquaintance, a short time since, and requested to know if he operated upon the Caldwell principle, by cutting the ligament. She stated, that in the absence of Dr. Caldwell, she was compelled to find some one who could operate upon his principle. The dentist replied that he *could* operate upon the same principle. The lady then wished a tooth extracted for her little daughter ; accordingly the child was placed in the chair, and on examination, the tooth was found so loose, that it could have been extracted without an effort ; but our friend was shrewd enough to know, that if he had not pretended to have cut the ligament, the operation would have been unsatisfactory. He therefore took his penknife and severed the remaining slight attachment of the tooth to the process, and turning to the lady, said, "I have cut the ligament, the tooth you see is perfectly loose, and can be taken away with the fingers," which he accordingly did to the admiration of the lady, who declared it was the most perfect operation she had ever beheld, and scientifically performed, and promised to recommend him to all her acquaintances. And now for the conclusion. "How much is it, sir?" said the lady. "One dollar," replied he. "Is not that high?" "Not high when performed upon the Caldwell principle."

A couple of youngsters of our early acquaintance, took it into their heads to study dentistry, enticed no doubt by the apparent ease in securing a competency, as they thought it a "money making business." Well, they called upon a dentist to make inquiries as to time and the amount of fee. The dentist (!) replied, that he could learn them in *four weeks*, at a charge of *thirty dollars* each. We thought then the charge was exceedingly moderate,



but since we learned his abilities we think, nay, know, that it would have been outrageously extravagant.

MORAL. Cheap dentistry, as well as cheap teeth, we have found very expensive. Yours, R.

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For the Dental News Letter.

*Messrs. Editors:*—I wish some of your contributors would inform the profession, through the "LETTER," of the best method of fastening blocks to the plate. I have tried soldering, and riveting in several different ways. For a few months past I have practiced the following method, and prefer it to any other with which I am acquainted. Let each tooth of the block have a hole of the usual size through its entire length, without being counter-sunk on the grinding surface. Platina rivets, somewhat shorter and smaller than these holes, are then to be soldered to the plate in their respective positions; the blocks are then easily slipped on to the plate, and are to be fastened in the following manner: make a cement by taking two parts of sulphur, by weight, and one part of pulv. felspar, mix them together in a small crucible, and melt them slowly over a spirit lamp until they are thoroughly incorporated, and the mass has slightly changed to a reddish color; now remove the crucible from the lamp and place it in a cup of charcoal, to prevent its cooling. Be careful that the sulphur does not *burn*, if it should, it will destroy the cement. Now heat the plate and blocks gently by the lamp, and then place them upon a *dry* plaster cast; with a small instrument of wood or steel put some of this melted cement between the blocks and plate, and press the former firmly down upon the latter, holding them there until the cement hardens, which will require but a moment. The blocks are now firmly fastened, small spaces between them and the plate obliterated, preventing entirely filthy accumulations, and making plate and blocks one solid piece of work. After this is done, press firmly around the rivets small splinters of seasoned hickory, so as to fill entirely the space around the platinas; then with gold foil make a solid and handsomely furnished plug above the rivets, filling up entirely the holes in the blocks. The plate should be cleaned *before* putting on the blocks, as, after they are fastened in this way, it will neither do to put them into acids or the fire. One great advan-

tage in confining blocks in this manner, is the facility with which they may be removed when desired. Another is the rapidity with which a set may be fastened in this way, requiring, as it does, but little more time than I have taken in communicating the method. If any of your readers have a better way, I hope they will let it be known.

*Use of Ether in filling teeth.*—Do the profession use sulphuric ether in filling teeth? I have used it since its first introduction into dentistry, but know of no one else who uses it for this purpose. If the teeth are very sensitive, dip a pellet of cotton in sulph. ether and place it in the cavity; do this repeatedly, until the sensibility is lessened, or entirely removed. If there are several cavities to fill, prepare them all in this way, excavating a little from each one by turns—keeping all the rest soaked with ether. In this way I have filled the most sensitive teeth *without* pain, and even when the nervous pulp was exposed.

*Gutta-percha.*—In filling a tooth having the live pulp exposed, I place a very thin piece of gutta-percha over it before introducing the plug. It is a bad conducting substance, very indestructible, and prevents inflammation and consequent pain in the pulp. A great deal of successful experience in these modes of operating have given me unshaken confidence in them.

H. S. CHASE, M. D.

Woodstock, Vt.

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For the Dental News Letter.

### CHLOROFORM—ETHER, ETC.

Chloroform and Ethers are probably more extensively used in Boston and vicinity than in any other part of our country, and instances of unpleasant effects resulting from their use seldom occur.

Here they were first extensively introduced as anæsthetic agents, and experience shows that no fears need be entertained by operations on patients in the majority of cases. Often due caution is not observed in obtaining a pure article for inhalation; and the frequent complaint that it is impossible to bring the subject sufficiently under their narcotic influence to operate successfully, can be traced to this cause.

Their extensive use here have stimulated manufacturers to use



their utmost exertions to furnish pure articles, of uniform strength.

The concentrated chloric ether has been more recently introduced, and consequently is less known to dentists, but still is a good article.

A superior quality of all these articles, as well as Dr. Warren's Concentrated Chloric, used by surgeons at the Massachusetts General Hospital, may be obtained of J. R. Spalding, 23 Tremont Row, Boston. F.

Boston, Sept. 1850.

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For the Dental News Letter.

### FORCEPS FOR EXTRACTING LOWER MOLAR TEETH.

*Messrs. Editors:*—Having experienced some difficulty in extracting lower molars, at least in adjusting the instruments upon them, from the peculiar position they occupy in some mouths, I have been led to modify my forceps, until they have arrived at the shape represented in the above drawing, which I find to be a great improvement, enabling the operator to see both points of his instrument at the same time from the inside of the jaws, and allowing him to place them with more certainty between the roots, where they meet the alveolar process. The forceps



were made by Mr. Morson, and have his improved points, which are so formed that in many cases, by the pressure of closing the handles alone, the tooth is forced from its place before the patient is fairly aware that the operation has commenced. I need not add that the general finish of his instruments is of the best character, and that their temper is incomparable.

Yours, &c.

Brooklyn, N. Y.

R. G. HOLMES.

P. S. I forgot to add that the swell on the sides of the jaws assists materially in holding the cheek of the patient away while adjusting the points, and thereby giving a more uninterrupted view.

# THE DENTAL NEWS LETTER.

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OCTOBER, 1850.

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As we promised in our last number, we commence this—fourth—volume with an increased number of pages, or thirty-two to the number, making one hundred and twenty-eight to the volume. This gives us more respectability in point of size, and affords additional room for correspondence and usefulness, a fact which we hope our professional brethren will bear in mind, and render their aid in sustaining the original department.

We feel warranted in this enlargement, from the favor with which the News Letter has been received and commended ; and the disposition manifested on the part of some—abundantly able—to contribute to its pages.

We can now boast of a larger circulation than any other dental periodical, in this or any other country, as we print an edition of twenty-five hundred copies. This, it will be acknowledged is no faint praise.

Our desire is, to publish a work worthy of the profession, that shall be a welcome and useful visitor, and that shall find its way into every section of our vast country, and indeed wherever the language is spoken,—already we circulate some four hundred in Europe. In the accomplishment of our purposes in this connection, we have to aid us, an extensive correspondence with the profession, besides a personal acquaintance with very many of them. In view, then, of these advantages, it is but fair to infer, that with the aid and good wishes of the profession—which we think we may depend upon—we can make the Dental News Letter all that could be desired.

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We had hoped to have received several promised original communications in time for this number, but have been disappointed. We shall receive them, with many others, we trust, in time for our next.

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We commence in this number the publication of a paper on Mechanical Dentistry, and expect to complete it in our next.



## SOLDERING FURNACE.

The above is the title given to 'a little article contrived to facilitate the soldering of whole or partial sets of teeth.

Its object is to save, almost wholly, the use of the blow pipe, and to prevent the liability of the teeth cracking by being heated up too suddenly. The construction is very simple, the lower part being a circular box of sheet iron, about  $3\frac{3}{4}$  in. in diameter, and  $1\frac{1}{2}$  in. deep, to the bottom of which is fastened a handle 6 or 7 in. long. The lid of the box is perforated, and is surmounted with a flowing ring or bowl of the same material as the rest, 2 in. high, which forms a place for the reception of charcoal. A draught hole is made in the side of the box, to allow the air to pass through the perforated lid.

To use the furnace, fill the upper part with small pieces of charcoal, on which place the work to be soldered; light the coal, and let it burn gradually until the work is nearly red hot, then fuse the solder with the blow pipe and spirit lamp, which requires but a very few minutes time, and allow the small remainder of coal to burn out, which causes the work to cool gradually.

Having been shown one of them operate, we were induced to order a lot, believing them to be a very useful contrivance, and a great saving of wind in soldering, as but a short blast with the mouth pipe is sufficient to flow the solder.

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## NEW STYLE PLATINA PINS.

We have made an improvement on the forms or shapes of the platina pins which we now put in teeth. The end that is embedded in the tooth, is bell shaped, which spreads the end, and leaves a cavity in which the body or tooth material is compactly embedded, thus forming a complete dove tail. This we believe to be superior to the head, as it avoids so much platina in one spot, thus rendering the teeth less liable to crack from the expansion of the metal in heating, and the attachment of the pin to the tooth is stronger from the spreading of the edges of the pin.

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*Steam Soldering Lamp.*—We have received an article of this kind, which works well, and can be sold for four dollars.

We have had manufactured a large lot of Malleable Iron Ladles for melting, of improved shape and various sizes.

W. A. F. is informed that his communication was received, but the article described, is in use by many of our dentists. Others use a small saw, and file cut wheels in their lathes, after the same principle, and for the same purpose.

We would be pleased to hear from him whenever he has any thing of interest to communicate.

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*Patent Blow-pipe Lamps for melting metals.*—This is a new article for melting zinc and lead for casts, and other purposes. It is a small copper vessel with a chamber surrounding it, and a tube from the chamber or boiler passing up from the bottom of the vessel. Alcohol only is used, which is put into the boiler, also some in the bottom of the vessel. The last is ignited, and from the heat of which, steam is generated in the boiler, and driven through the tube directly upwards against the bottom of a ladle which contains the metal to be melted, and rests upon a sheet iron frame which encloses the lamp. The vapor, as driven off, is ignited by the burning alcohol in the bottom of the lamp, and the flame is thrown with great force and heat against the ladle.

It will melt zinc in about six minutes, and lead in two. It is much cleaner, and no more expensive to use than a charcoal fire.

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*A case of Malpractice.*—A friend in the interior of New York State, has sent us a specimen of the first and second molar teeth of the left upper jaw, connected by a large piece of the process; all of which were extracted by a dentist, whose name we will not mention. It seems the intention was to extract the first molar, which is somewhat decayed; but, in removing it, the second molar, with the process surrounding them, and that also covering the wisdom tooth, which was deeply seated, came away; and after fracturing the process, in order to remove the portion, took his penknife and dissected it out. A key instrument was used, and we are satisfied as to the amount of power applied from the specimen before us.

The patient remarked, after the operation was performed, that "he thought the day of judgment had come;" and well he might.

It is a matter of rejoicing, that such occurrences are rare, considering the many bunglers there are at it.



## ANIMALCULES ON HUMAN TEETH.

Dr. H. J. Bowditch, of Cambridge, Massachusetts, states as the results of many microscopic examinations of the accumulations on the teeth of healthy persons, that of 49 individuals, most of whom were very particular in the care of their teeth, animal and vegetable products were found in every instance except two. In those cases the brush was used three times a day, and a thread was passed between the teeth daily. Windsor soap was also used by one of these two persons, with the brush. Dr. Bowditch tried the effect of various substances, in destroying the animalcules, and especially tobacco, by which they seemed to be in no way incommoded. Soapsuds and chlorine toothwash invariably destroyed them.

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☞ It is currently reported in Philadelphia, that Dr. L. Koecker, of London, has deceased. We were aware that his son had gone to London, in consequence of the sickness of his father, and therefore are disposed to think the report true.

With the merits of this gentleman, his prominency and labors in the profession, all are familiar, and require no mention from us.

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*Eleventh Annual Announcement of the Baltimore College, and the Sixth of the Ohio College of Dental Surgery.*—We are in receipt of the above pamphlets, and from a glance at them, we notice that the Colleges are both in a flourishing state. We hope they will be ably sustained, as those who are at their head are all able and efficient in their several positions.

See advertisement of Ohio College on cover.

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*Washington's Portrait.*—The critics have just discovered that neither Stuart nor Peale succeeded in giving the exact expression of Washington's mouth on their portraits. One painted him with a bad fitting set of artificial teeth, and the other without any.

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C. P. is informed that the reason why his first article did not appear, is, that we think a better plan has been adopted, which we expect to give in our next number. He has our thanks notwithstanding.

We regret to announce the decease of the following Dental practitioners. Drs. L. Roper of Philadelphia, J. Jones of Dayton, Ohio, and C. Blakeley of Havana, Cuba.

A correspondent of the New Orleans Delta thus notices the death of Dr. Roper, who was, at the time of his decease, on his return from California.

“He was generous and manly, high spirited and enterprising. He left in Philadelphia an idolized wife and daughters, and was returning to them with sunshine on his path, and happiness in his heart, when the destroyer arrested him. The moment he felt that he was seriously ill, he inquired if, in the crowd of strangers on board, there were any Masons, and immediately his bedside was surrounded by faithful and attentive friends. He died calmly, and the last words that trembled on his lips were: ‘My wife—my children.’ Ah! death is at all times a bitter cup, though the fainting head be held, and the dying lips be moistened by the tears of those we love. But to be called hence when these are all away—‘by *strangers* honored, and by *strangers* mourned.’—Oh! this indeed *is* death—this it is to *die*! His mortal remains were committed to the deep with the solemn ceremonies of the brotherhood. The white crest of the Pacific was his winding sheet, and its wild waves chant his eternal dirge.’

With Dr. Jones we were personally acquainted, and had an exalted opinion of his abilities and virtues. He was an ornament to the profession, and an honest man. With Dr. Blakeley, who enjoyed a very extensive practice, we had had considerable dealings, and always found him perfectly upright and trustworthy.

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*Fusible Metal.*—The following receipt was given us by a superior mechanical dentist, who pronounced it the very best mixture he had ever tried.

Bismuth,	-	-	-	-	-	8 parts.
Lead,	-	-	-	-	-	5 “
Tin,	-	-	-	-	-	3 “

It will melt at about 200°, or under boiling water point. For male cast, use tin only.



*Principles and Practice of Dental Surgery.* By CHAPIN A. HARRIS, M. D., D. D. S. Fourth edition. Lindsay & Blakiston, Publishers: Philadelphia.—A fourth edition of this valuable work has been called for, and recently published. The whole work has been revised with great care, and some fifty additional pages added.

It enjoys, deservedly, the reputation of being the best work on the subject extant.

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*Valedictory Address delivered before the graduating class of the Baltimore College of Dental Surgery, at the commencement of the session of 1849-50.* By S. P. HULLIHEN, M. D. *Address to the Society of the Alumni of the Baltimore College.* By JAS. ROBINSON, D. D. S., of London.—These addresses are prepared with great care, abound with instruction, and are creditable to their authors.

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*Paper Tooth-Powder Boxes.*—We have just received a large quantity of these from Paris.

There has been considerable demand for an article of this kind in consequence of their neatness and low price. We can now supply all orders.

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“*Convulsions and death caused by the shortening of a tooth longer than the others.* A nun of Padua having had a tooth shortened in order to get rid of the deformity, died immediately in an epileptic convulsion. A small fragment of nerve was discovered in the section of the tooth.”

This case and others which fortunately have not terminated so seriously, should be a warning to all operators upon the teeth, not to inflict *sudden and violent pangs*. Experience shows us that a great amount of pain can be endured, if slowly and gradually inflicted, while instinct teaches us all to dread sudden pangs, even of more moderate intensity. Even in extracting a tooth, it is better to operate gradually rather than to wrench it out with a sudden and violent effort. If pain be gradually inflicted, the nervous system, conscious of the coming trial, summons up all its powers of endurance; but when taken by surprise, the shock is severely felt and the consequences may even be fatal, as in the case just quoted.—*Jour. Dent. Science.*

## REPORT OF PROCEEDINGS OF PENNSYLVANIA ASSOCIATION OF DENTAL SURGEONS.

A stated meeting of the Association was held Oct. 1, 1850. The President, Mr. C. C. WILLIAMS, in the chair, and Mr. A. R. JOHNSON, Secretary.

On motion, the regular order of business was suspended to go into an election to membership, when Messrs. J. McCalla and J. Stovell were elected. Committee on premium teeth reported that they had attended to their duties, in procuring and presenting to Jones, White & Co., the gold medal awarded by the Society, and ask to be discharged, which was done.

The Librarian was requested to furnish a report for next meeting of the Association. Treasurer's report read and accepted, and a committee to audit his accounts reported them correct.

The Treasurer was instructed to collect all moneys due the Association.

Dr. J. McCalla, by request, read an essay on Epulis, (which will be found in our pages.) Drs. Parry, Beale, and Mr. Williams made some remarks on the subject of the essay, giving various cases which had come under their notice and treatment, and all recommending the actual cautery.

An essay on the Decay of the Teeth, from Dr. Jas. Parry, was now read.

On motion of S. L. Mintzer, the resolution offered at a previous meeting to reduce the initiation fee from ten to five dollars, was now taken up, and after considerable discussion, in which it was shown that many worthy young men were kept from joining, in consequence of the amount of the fee, was carried.

Jones, White & Co. presented the Association with vols. 1, 2, and 3 of Dental News Letter, also a specimen of a malpractice, in the shape of two molar teeth, in the extraction of one of which, the other, with a large portion of the process was brought away.

Dr. E. Parry presented the Association with a small instrument for holding needles for the removal of the nerves of teeth, a neat and convenient article, for all of which the Association returned thanks.

This being the meeting for the election of officers, the following were elected:

President, C. C. Williams; 1st Vice President, S. T. Beale, M. D.; 2d Vice President, C. Moore; Recording Secretary, J.



D. White, M. D.; Corresponding Secretary, J. H. McQuillan; Treasurer, F. A. Reinstein; Librarian, S. S. White; Examining Committee, Ely Parry, M. D., J. D. White, M. D., S. T. Beale, M. D., T. L. Buckingham, and S. L. Mintzer.

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*Case of Disarticulation of the Left Condyle of the Lower Jaw, with Excision of nearly the Left Half of the Bone, on account of a very large Cartilaginous Tumour growing from and occupying the site of all this part of the Bone, save the Condyle and Neck.* By W. R. BEAUMONT, Professor of Surgery in the University of Toronto, Canada.—This patient, a child, aged seven years, was admitted into the Toronto Hospital, September 17, 1849. The tumour on his admission extended upwards to the zygoma and malar bone, almost covering the temporo-maxillary articulation; it reached downwards to fully an inch below the angle of the jaw, extending inwards into the mouth as far as the mesial plane backwards, beyond the ramus of the jaw, and forwards to the posterior bicuspid. It pushed the tongue quite to the right of the mesial plane, concealed the velum, and almost completely filled the isthmus faucium; the molar teeth of the upper jaw were deeply imbedded in the tumour, which kept the mouth at all times open, with a constant dribbling of saliva, the upper and lower incisors not meeting by fully half an inch. The tumour had been first observed three months back—September 25th, 1849. Professor Beaumont performed the operation for its removal, commencing by making a curved incision (the concavity upwards,) extending from the lobule of the ear to the angle of the mouth, dissecting off the integuments from the tumour. The tumour was firmly wedged in under the malar bone; the outer wall of the jaw was cut vertically through with a small straight saw; the section was then at one stroke completed with a strong bone forceps; the condyle was disarticulated by being firmly grasped in a forceps, the joint being opened by dividing the external lateral ligament and capsule. The patient did very well; a small salivary fistula was formed in the cheek, which eventually healed on December 1st, 1849. The patient was quite well. The right half of the lower jaw was drawn a very little towards the left side, about the eighth of an inch; the external cicatrix was a mere line.—*London Lancet.*

# THE DENTAL NEWS LETTER.

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JANUARY, 1851.

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For the Dental News Letter.

## MECHANICAL DENTISTRY.

BY T. L. BUCKINGHAM, DENTIST, PHILADELPHIA.

(CONTINUED.)

After punching, cut the lining off the proper length and place it on the tooth. When all the linings have been punched and cut off, they should be filed to the shape required.

Some operators make the linings round on top, some square, and some oval on the outer surface; but, let the shape be what it may, they should all be of a length, and present an uniform appearance. When all are arranged they should be taken off, commencing at one end, and laying them in a row with the side up that goes next to the tooth; then put some borax on each lining and also on the pins of the teeth; then replace the linings on the teeth, and with a sharp graver split each pin and wedge apart so as to bind the lining close to the tooth. The reason for placing borax between the linings and teeth, is, to aid in flowing the solder through the holes to the backs of the teeth. I have often found that when there was no borax there, the solder would only flow over the ends of the pins, and when I filed the solder off, the lining could be easily drawn off the tooth.

When the linings have all been fastened in this way, we may proceed to solder the whole case at once; but as it is very hard to finish up a case, when the teeth have been soldered to the lining and the lining to the plate all at one heat, I prefer to solder the lining to the tooth first. Remove the teeth from the plaster and lay them on a piece of charcoal with the lining up, borax the lining and lay a small piece of solder on each pin and heat them up very gradually; blow a broad, gentle flame, and move the charcoal so as to make the flame play in a circle around the teeth without touching them at first; then gradually diminish the circle until the flame comes directly on the teeth; still keep



the charcoal moving until they are at a full red heat, then let the flame rest a moment on each tooth and the solder will flow. Great care should be taken in heating teeth; it should be done with a broad, steady, gentle flame. If they are heated with very fierce puffs of the blow-pipe, or with a jet of the flame, they are almost sure to break, and it is very annoying to have a tooth break when the case is so near done. When they are soldered, they should be covered at once with a piece of charcoal hollowed out, to protect them from the air in cooling. Now file the linings smooth and put the teeth back in their places in the plaster, but be careful that no pieces of plaster get into their places. When they are all in their proper position, mix some plaster and cover the points of the teeth as far down as the linings, which will keep them from being drawn out of their places in soldering to the plate.

If there be any places where the linings do not fit close to the plate, the space should be filled with small pieces of gold. Then borax well the joints to be soldered, and lay two or three pieces of solder on each joint. The solder now used should melt more readily than that used in soldering on clasps or linings to the teeth. The case is now ready for the last soldering. Commence blowing on the outside of the plaster, and move the charcoal so as to heat the plaster evenly all around; when the plaster is red hot on the outside, then bring the flame in on the plate and keep it moving from side to side until it is of a red heat, then let the flame rest on each tooth until the solder flows.

In soldering, the heat should be applied very gradually and steadily. The habit of using the blow-pipe properly is soon acquired, if we do not hurry too much. The difficulty in most cases is, that we blow too hard at first, and the lungs become exhausted before we are half through; while, if we would blow gently, and when we found the lungs becoming exhausted, would stop and take an inspiration or two, we could get through without difficulty.

After the case is soldered, it should be let stand in the plaster until it is perfectly cold, for fear the cold air coming in contact with the teeth while hot should break them. After being removed from the plaster, the case should be boiled out in some diluted sulphuric acid for a few minutes; the teeth, however, being put in the acid before it is warmed. Where there is time

to wait, let the case lay in the cold acid for thirty minutes; this removes the borax and fire-coat from the plate. Then, with a graver or scraper and files, finish the case up as smooth as possible; then with a strip of scotch-stone, stone all the file and other marks and scratches out of the plate, keeping it wet while stoning; then wash all clean, and burnish with steel or blood-stone burnisher, using soap and water during the operation; I prefer, however, to polish with a brush-wheel on a lathe, using sweet oil and tripoli or rotten stone; then with a buff-wheel about the size of half a dollar, made of two or three thicknesses of hat-felt or thick buckskin, polish the plate all over where the buff will touch, and where it will not touch use a pointed stick covered with soft leather; then brush it again with the brush-wheel, and wash clean with soap and water; then with another buff-wheel made of soft buckskin on which use rouge, polish your plate well till you have a beautiful gloss; wash off the rouge and dry the case with chamois leather or a soft napkin, or, what is better, cover the whole up in some dry saw dust for an hour or so, which will absorb the moisture without injuring the polish. The case is now ready for the mouth.

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For the Dental News Letter.

### ATMOSPHERIC PRESSURE.

BY JAMES FLEMING, M. D., HARRISBURG, PA.

There are some difficulties which lie in the way of our proceeding for the insertion of entire substitutes upon the above principle, which appear to be quite overlooked. Some of these I consider of very great importance; especially one, which I will first mention, and which lies at the foundation of the whole matter. It consists in the fact that a substance which is capable of taking a true impression of the gum, cannot be removed therefrom without more or less *distortion*, unless atmospheric pressure be taken off; or, in other words, the *vacuum* which has thus been created be destroyed. I have nowhere seen a plan proposed which was directly intended to obviate this difficulty. It is true that *plaster*, if it be good, and kept in the mouth a sufficient length of time, (a proceeding which is not very agreeable to the patient, to say the least of it,) will harden sufficiently to allow of its removal with but little if any *swagging*. But how can it be started, if it



be perfectly *true*, without first moving it and altering its face sufficiently to take off at least a part of the pressure? For be it remembered that fifteen pounds to the square inch is no trifle to overcome; and if there is not a yielding somewhere, the effect upon the gum itself would be pretty severe. It is obvious that if the plate, which is to have the exact form of the impression, is to be sustained with any considerable degree of firmness, the impression itself will be even more firmly held, if there be no yielding any where. Indeed, I am persuaded that a *perfect* impression can never be had, without taking off, in some way, atmospheric pressure, so as to allow of its easy withdrawal.

I have, for five or six years, been in the habit of adopting a very simple plan for obviating the above difficulty. And I believe that any one who will once test its utility, will not again omit using some means of the kind for the purpose alluded to. A few days ago I was trying a plate in a lady's mouth, which I had just prepared. After I had directed her to exhaust the air from under it, by suction, the effort which it took to remove it quite alarmed her, and she asked me, in all sincerity, "Is there any danger of its getting so fast in my mouth that I can't get it out?" This plate was prepared without an *air chamber*. Of this, however, I shall hereafter speak.

*To take the impression of the mouth*, I consider *bees-wax*, when well managed, the very best material that can be used. I have seen it stated that it will sometimes stick to the mouth. This, I apprehend, is a mistake. It should not of course be used too soft. And it is much better to warm it at a fire, or over a spirit lamp, than in hot water. As to its *sliding* over the mouth, the difficulty is very easily obviated. If firm and steady pressure be made *directly against the palatal arch*, the wax will receive the exact impression of that part of the mouth. Having selected a suitable wax-holder, (of which I have a variety, both in size and depth,) I place in it the wax, suitably prepared, and immediately perforate it through an opening previously made in the *holder* towards the centre of the palatal arch, and place therein a *tube*, which is barely long enough to extend through, both ways. When the impression is being made, this tube will press downwards, and will leave a complete opening through the whole, for the admission of air, so that it can be removed without any diffi-

culty and without distortion. Before doing so, however, it should be firmly held with one hand, while, with the other, pressure is gently made all round the margin. It should then be moved in a direction straight off from the gum, starting it first in front. The sides of the holder should always be high enough to guard the impression from injury, in withdrawal from the mouth.

Having thus obtained a perfect impression of the mouth, there is another fact which must not be lost sight of at this stage of the proceeding, in order to obtain a *true model* therefrom. Wax will contract in cooling; and as it will be of different thicknesses at different points, after the impression is made, so will the degrees of contraction be varied over its surface. Hence, to prevent this effect, I make my *cast* at once, mixing the plaster with *tepid* water. In this way, I think there can be a nearer approach made to a perfect model of the mouth, than can be obtained in any other way.

As to the contraction which takes place in the *metal castings*, I think it is, perhaps, an advantage. The plate will be somewhat expanded by the heat of the mouth; but what is still more worthy of consideration, there is generally more or less absorption of the gum for a while after it has been inserted. And in this process, there is an adaptation of its surface to the face of the plate.

In *swedging* up the plate, great care should be taken to go no further than is necessary to bring it to the exact form of the model; as any *stretching* beyond this point will be certain to impair the fit.

*Central and Lateral Air Chambers.*—Although I have, until very recently, been quite in the habit of using these auxiliaries, as they are supposed to be, for the insertion of upper sets, yet I must say it was never without some misgivings as to the correctness of the principle. If a plate be perfectly fitted to the whole arch and ridge, it needs no such assistance to make it adhere firmly. Indeed, the only effect of them appears to be to destroy the *equality* of pressure, and thus *to take away much from the comfort of the wearer*, besides lessening, perhaps, the amount of adhesive power. The plan which I have most recently adopted, and which has given me more satisfaction than any other, is to



place in the plaster model, before making my zinc cast, a piece of very thin wax paper, cut into such a shape as to extend over what would be the *most solid portion* of the palatal arch, taking care not to come, at any place, to the edge of the plate. It should be as thin as card paper, and pressed firmly down upon the cast; the object being to allow of the ultimate contact of the entire plate with the gum. It was in this way that I prepared the plate alluded to above.

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For the Dental News Letter.

### SALIVATION BY INOCULATION.

MESSRS. JONES, WHITE & McCURDY:

*Gentlemen*:—If the following case is of any interest, it is at your service:

Mr. J. Dalrymple, a farmer of superior attainments, about 35 years of age, called on me in October last, and wished me to examine his mouth and see if I could do any thing for him. On examination, I found his mouth in a very bad state, his gums very much swollen and inflamed, and discharging pus from around every tooth; the teeth all loose and sore. To my question whether he had been salivated, (as his mouth indicated a severe case of salivation,) he answered no; that he had never taken any calomel to his knowledge, and then made the following statement:—That about four years previous he was in Chicago, and thinking his teeth wanted cleaning, he called upon a dentist, but found him engaged, and waited till he got through with the patient, then took his seat in the chair. The dentist, after examining his teeth, proceeded to remove the tartar, but was so rough about it, lacerating the gums so much, that he complained of his giving him unnecessary pain. The dentist replied, that if he had such a mouth as the person for whom he had just operated, he might complain; and went on to say that that person would lose all his teeth in consequence of his having taken so much medicine. He left Chicago a few days afterward for Peoria, and by the time he arrived at home, his mouth was in such a condition that he could get nothing but fluids into it, the gums being so very much swollen and inflamed. Pus was formed and discharged in great quantities. When the swelling went down, his teeth were so loose that they could have been removed

with the fingers. His physician supposed he had been salivated. He gave him a wash for his mouth, which helped him, but did not restore the gums to a healthy state. On the slightest cold, his mouth would become worse.

This was the substance of his statement. When he came to me, he had lost about half of his upper teeth, and rather more of the lower, which had been removed or fallen out, all being perfectly sound, as were those still remaining, which I removed.

This case is similar to the one related by Mr. Keith in the third number of volume third of your News Letter, and I think it may be safely inferred that they were both cases of salivation by inoculation, and shows the very great importance of cleansing the instruments thoroughly after each operation.

Yours, Wm. PENN McMILLAN.

Peoria, November 2, 1850.

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#### REPLACEMENT OF NATURAL TEETH.

MESSRS. JONES, WHITE & McCURDY:

*Gentlemen*:—Should the following case be of any interest, you are at liberty to insert it in the News Letter:

A boy about thirteen years old, sent to me by a medical man, brought, wrapped in a piece of paper, the four lower incisors, which had been knocked out by a wheel in a worsted mill. The accident occurred at 3 o'clock in the afternoon; when he arrived at my house, it was 8 o'clock in the evening. Being in the country, five hours had elapsed before the teeth were replaced. The surgeon to whom he first applied, might have accomplished it much sooner; but as the teeth were the lower incisors, it required the more practised eye of a dentist to put each in its respective alveolar socket. The gum was bleeding and the wounds fresh, so that little difficulty or pain was encountered in replacing them. Three months have now gone by, the teeth are firm, the gum well united to their necks, and their color lively, not dull. The boy complains of slight pain upon pressing the teeth down firmly with the thumb.

I do not send you this case as any thing very new or unusual, but merely with the hope of drawing forth some remarks upon this part of Dental Surgery, which I think has not met with that attention at the hands of American dentists which it deserves. I



should like to know how long after an accident of this kind all chance of success would be considered gone; what is likely to be the appearance of these teeth a few years hence; how are they nourished, &c. &c. A very small portion of periosteum was left on the roots. Many interesting pathological discussions might arise from this subject. Have any of your correspondents made microscopic examinations of sections of teeth which have been knocked out and re-inserted? The bone would probably present the same appearance as that of some fangs, which are found lying on the gums, perfectly sound, receiving nourishment through the medium of a small portion of periosteum adhering to their sides.

Yours, truly, J. H. PARSONS.

Halifax, England, October 25, 1850.

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For the Dental News Letter.

#### ADVANTAGE OF DENTAL PERIODICALS—TREATMENT OF NERVES, ETC.

Messrs. JONES, WHITE & McCURDY:

There was a time, not very remote, when I might not have enjoyed the pleasure I now have of listening to and communicating with my brethren of the "Dental Art" through the medium of your ever welcome messenger, the "News Letter." Happily that period in the history of the profession is drawing to a close, in which selfishness was the reigning spirit—when the members of the fraternity kept jealously aloof from each other, or, if they met, each viewed the other with looks askance, as if he were not certain whether it was

"A spirit of health, or goblin damn'd"

that he beheld—when, instead of enjoying the privilege of reading papers indicative of learning and research, such as the invaluable articles of J. D. White, M. D., on the "Treatment of Dental Pulp," and others no less useful and instructive, contained in your pages, almost the only medium (excepting the standard and new works of dental authors) afforded to the country practitioner for keeping pace with the improvements of the age, was, perhaps, through the *auspicious* visit of some individual, (a thing of by no means extraordinary occurrence,) who, after taking especial care to insure a profound respect by the information, in

pompous terms, that the part of *his* name you take hold of was *Doctur*, proceeded to tell that he was in possession of an "*inval-able receipt*" (not recipe) "for *curin'* nerves, which he would let you have for five dollars, *bein' as it was you*, if you'd be *pertickler* and not tell *nobody*—not that he needed money, or *keered* about *sellin'*, but *bekase* every good dentist *like yourself* *ort* to have it, as much good could be *did* by it, and hundreds of dollars made—was a dentist himself, and wouldn't tell it at all only the state of his health *obleeged* him to travel, and as he was *passin'*, thought he would call, as you wouldn't like to miss the *opperchunity*." I wonder if your friend "R." has like specimens in his cabinet of "*curoisities*;" he certainly has if he lives out of the city.

But this is not what I commenced writing for, although I could not forbear a passing comparison between the facilities which present themselves now, and those formerly enjoyed by those who desired to keep up with the advancement of this branch of the healing art, and an expression of the gratitude I feel to those of your correspondents to whose kindness I at least feel indebted for many useful hints, for each of which I would consider five dollars a small compensation; although I have a number of them for the trifling subscription price of your "Letter."

My object in writing now, although I do it with diffidence, is to name to the profession an article which, for three years, I have used much (although not exclusively) for the treatment of nerve. The ingredients certainly have been used by others, though I thought it might not have been in this combination. It may be my ignorance, but I confess I have not heard of it if such be the case. I do not bring it forward as a new thing, nor as my own; for it is not; though I thought perhaps some good might be accomplished, if *all* were acquainted with it. A friend of mine, an M. D., wished me to experiment on it, and I have found it to answer well generally, *when I had the ingredients pure*; sometimes, however, it requires several applications before the nerve can be removed for plugging. I am not satisfied that it is *always* preferable to arsenic; but I have found it generally so in two particulars. 1st. With the exception of a momentary pain on its being introduced, it causes no inconvenience to the patient. 2d.



I find that the proportionate number of teeth lost in the effort to save them is less; permanent inconvenience, such as inflammation and loss of vitality of the periosteum, ulceration, &c., not being so likely to ensue. The probable reasons why I need not fill your paper to explain—it would be superfluous. The recipe is as follows:

Tannin, gr. x.

Sulph. Morph., gr. x.

Sulph. Quin., gr. xv.

Kreosot.—*Misce.*

I send you enclosed a partly developed inferior cuspidatus, which I obtained under the following singular circumstances. S. D. Scott, M. D., a successful surgeon of this town, called on me and wished me to see a patient whom he had not yet seen, but a portion of whose inferior maxillary he supposed, from the description of the father, had exfoliated. The patient, a boy of about seven years, had been kicked by a horse some three months previous, but was at such a distance that the force of the blow was spent before reaching him. The face was much bruised, but the bones were apparently uninjured, and the temporary teeth not displaced, though sore; he recovered from all apparent injury in a few days, though subsequently an abscess formed on his face a little back of the angle of, and somewhat under the chin, which discharged blood and pus until the partly formed fangs of a tooth appeared, which was supposed to be bone; it was removed and the wound speedily healed. The singularity of the case is, that a blow should so injure the germ in the maxillary as to destroy its vitality, and make it as an extraneous substance, and yet not fracture the bone itself nor displace any of the developed teeth.

C. N. HICKOK.

Bedford, Pa., Dec., 1850.

P. S.—I wonder if “R.” has any sets of teeth in his cabinet which can be adjusted by screws to the “jaw bone” through the gum. I was applied to for such a set some time since, to obviate the difficulty of removing them often, but was just out of the article.

C. N. H.

For the Dental News Letter.

## THE TOOTHACHE.

BY D. BATES.

Yes, yes it aches—that rotten tooth;  
I'll try no longer to conceal it;  
My face alone would tell the truth,  
And heaven knows full well I feel it.

Gods, how it tingles! Don't you laugh—  
I'd just as soon laugh at the dead;  
Each nerve is now a telegraph,  
And sends despatches through my head.

What did you say? Cold water—salt—  
Hop-poultice, with some opiate drugged?  
O yes, I know it is my fault;  
I should have had the puncture plugged.

Here, shut that door—confound the noise—  
“Yelp, yelp!” Well, keep from under feet:  
It seems as though those devilish boys  
Are mocking me, out in the street.

I'd rather have all sorts of ills—  
With fever burn, or ague shake;  
Take physic, drugs and patent pills,  
Than have this prince of ills—toothache.

Afraid to have it pulled, you say?  
A trifle, and I'd pull your nose:  
Can get a better? Where, I pray?  
“They make them at Jones, White & Co.'s.”

I'll not endure this longer, no:  
If there's a dentist to be had  
To ease me of this bitter woe,  
I'll have it out—I will—I'm mad!

Is Mr. ———, the dentist in?  
An aching tooth has made me fret;  
But something seems to lull the pain;  
Perhaps, sir, you can save it yet.

“Too long neglected—must come out;  
A mere unhealthy, useless shell;  
'T will hurt a little, there's no doubt,  
But when 't is over you'll be well.”



Well, pull it easy, Doctor, do—

'T will not hurt much, I think you said;  
The gum? why you are cutting through!  
Oh! ugh! you're pulling off my head!

Dear reader, one word let me say,

You've often, doubtless, been humbugged,  
But never worse, if you delay  
To have your crumbling teeth well plugged.

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ESSAY READ BEFORE THE PENNSYLVANIA ASSOCIATION  
OF DENTAL SURGEONS, OCTOBER 1, 1850.

GENTLEMEN:—We frequently hear persons whose teeth are unhealthy, inquire of us, "Why it is that they decay so soon?" and to wonder, "Why the Almighty did not make them last as long as they live?" And we are as often amused at their apparent astonishment and incredulity, when we inform them that the Almighty did not make their teeth decay. We tell them that all their pain, sickness, aches and afflictions, both mental and physical, have been inherited from their ancestors, and acquired by the process which they have passed through to render them civilized and refined. Instead of a sample of the most perfect piece of handiwork that ever came from the workshop of nature, (as man is said to have been originally,) we now behold a mere artificial specimen of frail humanity. There has been as much care bestowed upon their nurture as is required to cultivate a tropical planet at the north; their cradle was a perfect hot-bed, and they have been caressed and doted from infancy up. They have been fortunate, however, that the frosts of their early winters did not nip them in the bud; yet the greater wonder to me is, that they now have a sound tooth in their mouths.

Had their lot been cast amidst the uncultivated simplicity of nature, their companions none other than her unsophisticated noblemen, who rigidly conformed to all her laws, they never would have experienced one moment's pain or affliction of any kind, and their existence would have been one perpetual spring-time of comfort and ease, and their teeth would then have remained perfect "as long as they live."

It would appear, then, that "every ill which flesh is heir to"

in the artificial state of civilization and refinement in which we live, are penalties inflicted for the violation of nature's laws. One of the severest of these are diseases of the teeth—one which, if it does not give rise to, often aggravates every affliction which the physician is called upon to heal. We frequently see persons whose friends suppose them to be “laboring under an incurable decline,” restored to perfect health soon after the extraction of all their diseased teeth, (which, in such cases, are generally the whole sett,) without any other treatment than so preparing their food as to dispense with the necessity of mastication. If such unpleasant consequences arise from diseases of the teeth, and such happy effects result from restoring the mouth to health, the well qualified dentist is a necessary requisite to our comfort and well-being.

It is a source of regret that the means of imparting and of acquiring proficiency in the dental art are so limited. In our laboratory the pupil generally receives sufficient instruction to enable him to execute artificial work successfully. From our libraries, and orally, he becomes familiar with the theory of the science; but persons are so averse to having students operate for them, that it is impossible to procure a sufficient amount of practice to enable them to perform the most simple operation upon the natural teeth in a skilful manner. The consequence is, he feels that he has been imposed upon, and is sensible that he is wholly unprepared to perform the necessary operations of his profession. Such teaching, to say the least of it, is an imposition upon humanity and degrading to the profession.

I am well convinced that students receive more practical instruction in the infirmary of the Baltimore College of Dental Surgery in one season, than I can impart in two years; and I have long since resolved never to receive a student who would not obligate himself to graduate at that or a similar institution. It is to be hoped that many years will not have elapsed before we will have a dental college in all of the principal cities in the Union. We will then see less unskilful operations, mankind will be benefitted and the profession elevated.

Respectfully,

JAMES PARRY.

York, Pa., May 27, 1850.



For the Dental News Letter.

## CURIOSITIES OF DENTISTRY.

The following was related to us by a practitioner in the South:

A gentleman, for whose wife our informant had inserted some teeth, introduced to his acquaintance a Major H——, who desired some professional services, and requested him to examine his mouth. On examination he found that the four incisors and four bicuspidates of the upper jaw had been extracted, leaving the fangs of the two canines, which the Major said had been cut off a year before by Dr. ——, who also had extracted the eight teeth alluded to, and that the eye teeth were nearly sound; and further, that the dentist had *burnt* the eye teeth off, and almost killed him in the operation.

The teeth substituted were somewhat as follows: the four incisors were riveted to a strap of gold about a quarter of an inch wide, which extended back on either side to the first molars, and hooked around them. The bicuspidates and canines on each side were blocks of hippopotamus, chipped and filed to have the faintest possible resemblance to the natural organs. The blocks were riveted to the strip of gold also; but to make "assurance doubly sure," and put the finishing touch on all, the operator had conceived what he no doubt considered a splendid idea—that of fastening to the fangs of the eye teeth; which was done somewhat after the following original manner. The part of each block that was designed to represent the eye teeth, was fitted badly to the root, then a large cavity drilled in each root and filled with hickory, then a hole in each block corresponding to the holes in the fangs, of sufficient size to take in, head-foremost, a large sized *saddlers' tack*, where it was packed firm with splints of wood, and the points of the tacks which projected considerably, were pressed down into the wood filling in the fang, when the ends of the strap of gold were hooked around the molars, and the operation was completed.

We could readily believe that the operator in the above case was amazingly fertile in invention, if we did not suspect that he had just left the saddler's bench. However, it may be classed under the head of "*Saddle-tack Dentistry.*"

We were somewhat amused at a conversation we overheard some time since, at the sale of a dentist's effects, which occurred between two dentists. And here let me say, that on the decease of a brother dentist, and when his effects are to be sold by auction, that is the spot where dentists "most do congregate," which seems so much like "coming in at the death." There it is you will see re-unions, and shaking of hands, and the slightest possible amount of "gassing," as the following will show. But what is really deplorable is, that much in disparagement of the deceased and his effects is uttered, calculated to wound the sympathies of some relative or friend, and to affect the sale of the articles on which they have passed so harsh a judgment. But we are proud to say that but few manifest such a spirit.

The dialogue was somewhat as follows:

B. Good morning A, how are you?

A. Pretty well. How are you?

B. You come to take a look at the things also, I suppose?

A. Yes; but I am surprised that Dr. ——— should have operated upon such a mean, ragged looking chair as this. I would have supposed that a man with the practice he had, would have had a good chair.

B. Yes, so should I. And his instruments are common, old style affairs. Indeed, I would not have them in my office.

And so they go on, commenting on all the instruments and tools from the operating room to the workshop, with an occasional sling at the deceased, until, finally, after completely exhausting that topic, they turn to business—an inexhaustible fund.

B. How's business?

A. Very good—much as I can do. How is it with you?

B. Oh! I am hurried to death. Glad to see it rain when I get up in the morning, as I then have hopes of being able to eat my dinner without interruption, which is very seldom the case.

A. Yes, I am glad too. Indeed I hardly ever get to bed before midnight, and often then am hurried out of bed in the morning, to attend to some patient who has become tired of waiting his turn.

Precious creatures. Our advice would be, take good care of yourselves; for were you, by over-working, to "consign yourselves to an untimely grave," what would the world do, how



could your places be filled? Your services are too valuable—your lives too precious to be risked in thus over-tasking your abilities. Do be careful of yourselves. R.

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For the Dental News Letter.

## CONSIDERATIONS ON THE HUMAN VOICE IN RELATION TO DENTAL SURGERY.

BY J. D. WHITE, M. D., DENTIST.

*Messrs. Editors.*—I do not intend to enter into a highly scientific consideration of the above subject, but to endeavor to give, as concisely as possible, our experience in relation to it; and by what principles we are governed in our practice: seeing that by former methods, and of the practice of too great a number at the present time, much inconvenience is experienced by a disregard for a proper consideration of the organs of speech, in operations generally upon the teeth.

It would seem that few have any idea of the *physiology* of the voice, and still less have they *thought* upon the subject. That we have had great satisfaction by considering well the nature of the defects in the speech, in operating upon the teeth, and especially in setting artificial teeth, is true; while in the absence of such consideration much mischief would have resulted. If we can therefore succeed in directing the attention of some of the profession to this subject, our duty will have been performed, and our labors rewarded.

That the dental organs are largely concerned in enunciation, all will, I doubt not, agree. What are the first lisps of childhood but the effects of the imperfect development of the organs of speech, of which the teeth, gums and alveoli form an important part. Mark their changes from their earliest manifestations, modified by every change to mature development of the system generally, as well as by the organs of speech, up to the full, clear and robust development of adult life.

*The Larynx* is the principal organ concerned in effecting or producing what is called the voice. But many organs are necessarily concerned with it. The *trachea*, the *lungs*, *diaphragm* and *abdominal muscles*, below it: the *glottis*, *velum-palati*, *naries*, *roof of the mouth*, *gums*, *teeth*, *lips* and *tongue* above or out-

side of the larynx. No voice can be perfect with either of these organs imperfect, or in an abnormal condition.\* And it is well for the dentist, when he discovers that he cannot produce an agreeable voice in setting teeth for a patient, whom he had not known previous to the loss of their teeth, whether any defect complained of depended upon a mal-arrangement of his work, or that of nature's or of the health and habits of the patient. The dentist ought to be sufficiently familiar with all the organs of speech and their peculiar functions, to judge which one, or more, it is that are not properly performing their respective functions. Whether difficulties complained of, depend upon a loss of any or all of the teeth, their mal-arrangement or disease, the imperfect development of the alveolar processes, what sounds are most affected by the loss of either or all of the teeth. As for instance, a loss of the posterior teeth are calculated to affect some sounds more than others. A loss of the front teeth, superior or inferior, affect different sounds differently; hence a correct idea of the "*articulations*" or articulate sounds, of the organs of speech is necessary. For instance, we must know whether it be a *labial*, a *dento-lingual*, or a *guttural* sound that is defective, before a remedy can be applied; and precisely in what way it is deranged and required to be modified.

What we mean by the "*articulations*" is the manner in which the column of air is stopped or restrained by the approximation or contact of the walls or sides of the vocal tube, as the air is impelled through it by the lungs, diaphragm, &c., in effecting enunciation. For instance, the lips must be brought in contact with each other, and then separated suddenly, to pronounce the letters B and P. These are labial articulations. The margins of the tongue must be placed in close contact with the gums and necks of the teeth of the superior jaw, and dwell there for an instant, in the same manner as the lips are brought in contact to stop the column of air in the labial sounds, then suddenly removed, to effect the sounds of the letters T and D. And the root of the tongue and veil of the palate must be brought in contact in like manner, to pronounce the letters K and Q.

\* An excellent paper by Dr. Hill, on the effect of diseases of those relative organs of speech, will be found in the October No., Vol. VIII. of the Am. Jour. and Lib. Dental Science.



To better comprehend all the articulations which the human organs of speech are capable of making, or ever make, in any simple or compound word, we will give a novel sentence, composed by the celebrated Prof. Gouraud, some years since, and given in his lectures on Pnemotechny, and which contains all the articulations, according to that author, which the human voice is capable of making. By simply citing it, the memory can recall any articulation at any time, and the voice can be well tested in investigating the causes of defects in the speech. It is as follows:—"Satan may relish coffee pie." The articulations are made thus:—

Sa-ta-n may re-l-ish cof-fee pie.

Se-te-ne me re-le-she ke-fe pe.

The voice that can make those articulations distinctly, may be considered perfect, and it is, in its mechanical relations; and there will be no defects in the speech, unless it be from a morbid, nervous sympathy in the organs in some way, with each other, in forming compound words or sentences. Very frequently the general health of children is feeble and the chest small, taking in too small a quantity of air at an inspiration, to effect properly the explosive sounds, which will end at last in stammering. As it is, as far as we have been able to observe on those sounds, stammerers are most defective—in the *labial*, *dento-lingual* and *guttural*.

In running over those articulations, it will at once be thoroughly understood, how intimately dental operations are connected with the human voice. For instance, *se* is produced by the tongue merely compressing, for a short time, but not stopping, the column of air as it is forced along the vocal tube, between its apex only and the posterior parts of the superior front incisor teeth and the margins of the gums, and then suddenly withdrawn, when the sound is completed. Now, no word can be distinctly enunciated, in which this articulation occurs, unless the tongue form a shut tube by the contact of the lateral margins of the tongue with the margins of the gums, except at the mere apex of the tongue. Very frequently great defect is produced by a loss of the back teeth, and especially when great absorption of the gums and alveoli take place, simply because the tongue cannot close the tube laterally, but allows the air to

escape into the cheeks, producing a very defective enunciation. Similar effects are produced in articulating *te*, *ne*, *re* and *le*.

We corrected a marked defect of this nature in the case of a Dr. R——, of New Jersey, in 1843, by setting teeth behind the canines, three on one side and two on the other, by simply joining the stay plates together and forming an even surface with the other teeth. In this way the margins of the tongue could form an air-tight joint, so to speak, along its lateral margins, which prevented completely the escape of the air into the cheeks. He was considered by his friends a regular stammerer; in fact, in speaking, his cheeks were vibrating like a bellows.

Again, it will be observed, that as the air rushes over the apex of the tongue, the sounds will be modified by the front incisors being very close together or very far apart; hence in filing, very marked changes are sometimes produced in the voice, also by the loss of a single tooth. It is on this sound that lisping mainly depends. If the tongue cannot come forward on account of the extreme narrowness of the upper jaw and projecting position of the front teeth, there will be lisping on this sound, and on the articulation of *te*.

A young lady, whose upper jaw is smaller than the lower, and whose teeth project a little, so as to show partially between the lips, when the mouth is at rest, inquired of us a few days ago whether her lisping was the result of *affectation*, as she was charged with it by some of her admirers, or that of the position of her teeth. We remarked that it was on account of imperfect articulations. She could not place the tongue far enough forward in the articulation *se*. The apex of the tongue could not reach the front incisors, and stopping short of its proper position, gave more the sound of *te*, or commonly *th*. The articulation *te*, as has already been observed, is formed by placing the tongue against the necks of all the upper teeth and the margins of the gums, in the same way that the letters T and D are sounded; stopping the current of air for an instant and suddenly removing it, the current of air being continued, the sound is completed.

Now it is clear that if any of the teeth are destroyed, and the margins of the gums rendered very uneven, so that the tongue cannot accommodate itself properly to their margins, that all the words in which this articulation occurs will be proportionately



defective; hence, in setting artificial teeth, either partial or full sets, if care is not taken to restore the natural relations of the mouth generally, and especially the principal relations which are broken, but little good will be effected, and, most commonly, great mischief will be done.

The citation here of a case which occurred to us some time since, may be useful:—Mrs. R., an intelligent lady, consulted us; she had six teeth set by an eminent dentist of our city—two bicuspidis on the left side, and two bicuspidis and two molars on the right, all the teeth back of the canine on the latter side being lost; all were fastened by a band around the first molaris of the left side, and the plate partially covering the roof of the mouth, but not extending sufficiently forward to touch the necks of the front teeth, but making a straight cut across from the posterior part of one canine tooth to the other, thus leaving about a quarter of an inch between the necks of the teeth and the margin of the plate, so that in forming the *te* articulation, the tongue impinged upon an unequally resisting surface, and on that account could not make a perfect articulation. In addition to this, a small atmospheric chamber was placed in the plate, in imitation of Gilbert's, but not quite far enough back to prevent the tongue from striking it in this articulation. In fact, the tongue could not fit its margins to the margins of the gums properly, and consequently all words in which the articulation *te* occurred were extremely defective; and, as the atmospheric pressure was not complete, or the band well fitted, the operation was working up and down in speaking, and the air escaping above the plate, it rendered her enunciation very defective and difficult. She remarked that she spoke as if she had a lump of candy on the end of her tongue. We gave it as our opinion that if a plate was properly fitted along the posterior parts of the front teeth, and the chamber omitted, as it would be useless if a band were used well fitted to the molar tooth, the whole adjusted nicely to the necks of the teeth so as to enable the tongue to fit along the margin of the gum upon the plate without impinging on the gum in front, so that the surface impinged upon by the tongue be even and equal in texture or resistance, and the case held firmly in its position, the whole difficulty would be removed. She consented to have such an operation made, and happily it has completely

restored her voice, as without teeth she exploded many sounds into the cheeks; and with the first set of teeth other articulations were interfered with so as to render the voice even more defective with the artificial teeth than without. To change the second set for the first, by way of an experiment, her speech is so different that she can hardly be understood; while with the second case her articulation is clear and full.

That the voice can accommodate itself, in a very great degree, to the broken relations of the organs of speech, is very evident; but dentists are too much in the habit of setting teeth in a hasty and an unscientific manner. When all the natural relations of the mouth are restored by the intelligent dentist, there is not that impediment in the speech on first placing teeth in the mouth that is generally experienced.

It is very common to see full sets of teeth much narrower between the second molars than between the first or second bicuspidæ, giving the appearance of a horse-shoe. The tongue cannot narrow itself at the root and then swell out in the middle to fill such an arch, and make the articulations *se*, *te*, *ne* and *re*, in the dento-lingual sounds, or *ke* in the gutturals, because the root of the tongue swells and widens as it approaches the palate in those sounds. And if the set of teeth is too narrow across the second molars, which in artificial teeth are as far back as the natural wisdom teeth, the tongue, instead of falling between the opposite teeth, will impinge against them, dislodging them from the gum, and sometimes even from the mouth; which latter effect was not unfrequent when spiral springs were much in use.

To be continued.

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*Amputation of the two Superior Maxillary Bones.*—M. Maisonneuve lately performed the above operation upon an old man affected with cancer. The chain-saw and Liston's pliers were the principal instruments used; but the patient died a few days afterwards. M. Maisonneuve had, some time previously, performed the same operation upon a girl, whose superior maxillæ were necrosed, in consequence of exposure to phosphoric fumes. The girl is alive, and will be presented to the Surgical Society of Paris. The latter, however, condemned the amputation of both the upper jaws.



# THE DENTAL NEWS LETTER.

JANUARY, 1851.

*An Inaugural Essay on Zoo-Adynamia, presented for the Degree of Doctor of Medicine in the University of Pennsylvania, By GEO. J. ZIEGLER, M. D.; Published upon the Recommendation of Prof. S. Jackson. Phila.: Lippincott, Grambo & Co., No. 14 North Fourth street.*—Upon examining the essay of Dr. Ziegler, we can scarcely decide which to admire most, the evident application and research which has enabled him to unfold so much that may be made useful, upon that intricate subject, the nervous system, or the clear and concise manner in which it is discussed. The subject, “Zoo-Adynamia,” signifying privation or deficiency of animal or living force or power, is treated of under various heads, and embraces a very great number of morbid derangements, both of parts and of the whole of the animal economy, which may be, according to the author, either “local or general, partial or complete, temporary or permanent in their character,” and “may result from 1st, Modification of Structure; 2d, Interference with Function without Modification of Structure; 3d, Inanition; and 4th, Sympathy.” All of which may be very sudden or very gradual in their occurrence.

The object of the essay, being the elucidation of the pathology and the diseases of the nervous system, and the principles of treatment of such diseases for the benefit of suffering humanity, we congratulate the author upon the apparent success of his efforts. Much that has been written upon the nervous system has been enveloped in such a mist of hypothetical and theoretical speculation, that it has been in a great measure a sealed book to us. Now that these clouds are being dispelled, we are enabled to judge more clearly of its relations to the whole organism, and the more practical are the views we deduce therefrom. The reader will find that the subject is treated of in a very original and intelligent manner. Many of the views are striking for their novelty and apparently practical character; that referring to the use of *nitrous oxide gas* in various morbid conditions, seems to be worthy of serious consideration; the author recommends it in

a great variety of abnormal actions or conditions, as, for instance, in cholera, cyanosis, the asphyxia from carbonic acid, as in the burning of coal in mines, &c., from opium, &c., and in conclusion sums up with these general remarks upon its properties and practical applications, viz: "It may be used first, to supply oxygen to the blood where there is a deficiency or privation; second, as an arterial, cerebral, and nervous stimulant; and third, as an alterative, and would be applicable in all cases calling for these indications, there being no complications, contra-indicating its use." And, under the head of "Inanition," this sentence is worthy of attention: "But there is also another condition, which is not so often exemplified in local as in general adynamia, viz. in which there is debility without any perceptible cause, constituting that condition generally called inanition."

This condition frequently involves the cerebral nerves, deranging their functions, as for example, partial or entire privation of sight from debility of the optic nerve or motor oculi, the latter allowing the iris to expand and admitting too many rays of light; deafness from debility of portio-mollis, &c., and also the other functions depending upon these nerves, as the movements of the tongue, eyes, facial and masticatory muscles.

And again under the head of "Sympathy."

We believe the following remarks are not less important than true. "Various spasmodic affections have their origin in some disturbance in the sentient expansions of the nerves, which, from its sympathetic transmission to the nerve centres, break or disturb the chain or connection for voluntary motion, and excites the peculiar involuntary spasmodic action. Although, of course, there must have been a predisposition of the ganglionic centres, produced either by the constant *transmission* of the morbid impression from the part or surface affected to the centres, till the predisposition became the exciting cause, or from some other cause."

Although the essay for the most part is chiefly important to the medical profession, still we find in it much that is applicable and that *ought* to be interesting to the dental profession. We have not room for further extracts, but trust that our readers will peruse it for themselves. For sale by Jones, White & Co., Philadelphia, New York, and Boston; price 25 cents.



*First Annual Announcement of the Transylvania School of Dental Surgery, Lexington, Kentucky.*—This pamphlet, which some friend was kind enough to send us, informs us of the establishment of another Dental School, and in the great West, where there is abundant room for it.

To judge from the ability of the Professors, the great field in which the college is located, and the absolute necessity for such instruction as is usually given in the colleges already established; we would predict great success and usefulness to this institution. While upon the subject, we would say that Pennsylvania should have a Dental College located at Philadelphia, and we think it high time the profession should set about the matter. What, shall the great West take the lead of us? Think of this matter gentlemen, and do not let petty jealousies or any thing else hinder its accomplishment.

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*Remarks on the Proper Management of the Teeth, &c.* By GEO. R. CARRADINE, Dentist, Mobile, Alabama.—This is a little pamphlet of some fourteen pages, gotten up, we presume, for circulation among the author's patrons and friends.

In glancing over its pages, we notice that the author has made some wonderful improvements in the manufacture of teeth, "after long and tedious experiments," which teeth "have received the approbation of numerous gentlemen of the most profound science, both in this country and in Europe."

This very strong recommendation will doubtless be perfectly convincing and satisfactory to the gentleman's patrons, and result in great good to him, which result we presume will not be exceedingly disagreeable.

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*The Medical Student's Guide in Extracting Teeth, with Numerous Cases on the Surgical Branch of Dentistry; with Illustrations* by S. S. HORNOR. Philadelphia: LINDSAY & BLAKISTON, 1851.—This is a neat book of some seventy-six pages, beautifully printed, and is replete with practical instruction, peculiarly adapted to the class for whom it was written, and who require just such a book. We predict for it a rapid sale. We would be pleased to make some extracts if our limits would permit.

*A Treatise on the Diseases and Surgical Operations of the Mouth and parts adjacent, &c.* By M. JOURDAIN. *Translated from the French, and Published by LINDSAY & BLAKISTON, Philadelphia, 1851.* Page 444.—We have been favored by the publishers with a copy of the above work, and can compliment them on its appearance. It is gotten up in their best style, which is saying a great deal.

The readers of the Am. Jour. and Lib. Dent. Science will recollect the title, as part or all of the work was translated for and published in that Journal; to them, therefore, it needs no recommendation, but to all others we can say it will be found well worthy a careful reading.

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### NEW AGENTS.

We have appointed the following new agents for the sale of our make of teeth:

DR. J. M. BROWN, corner of Fourth and Walnut streets, Cincinnati, Ohio. This gentleman has been long engaged in the sale of teeth, is perfectly conversant with the business, and well known and highly esteemed by the profession throughout the West. Orders for our manufacture of teeth will be filled by him with promptness.

J. P. POLK & CO., Druggists, corner Fayette and St. Paul streets, (Barnum's Building, west end,) Baltimore, Md. We have been urged repeatedly to establish an agency in Baltimore, and now that we have done it, we invite the patronage of the profession in Baltimore and those contiguous. The Messrs. Polk & Co. assure us that every facility will be afforded in selecting teeth, and that they will use their best endeavors to give all complete satisfaction.

JNO. E. SMITH & CO., Jewellers, Galena, Illinois. These gentlemen in addition to teeth, of which they have a fine stock, will supply the dentists with gold plate, and many other things used by dentists, such as workshop tools, &c.

W. A. HERRON, druggist, Peoria, Illinois.

JOS. DOUGLASS, druggist, Allegheny City, Pennsylvania.

These gentlemen are desirous of securing the trade in their respective neighborhoods, and will spare no pains to give satisfaction.



Our agency in Louisville, Kentucky, formerly in the hands of T. H. M'Allister, is now, by the formation of a new firm, in the hands of

SUTCLIFFE, M'ALLISTER & CO., druggists, Louisville, Kentucky. We bespeak for them a continuation of the liberal patronage bestowed upon T. H. M'Allister.

### HAWES' MOULDING FLASK.

At the last annual meeting of the Society of Dental Surgeons of the State of New York, Mr. George E. Hawes, of this city, exhibited, in connection with his experiments on metallic casts, a new flask for moulding models, which, owing to the depression of the jaw above the most prominent portion of the gums, cannot be removed perpendicularly from the simple flask, in common use, without dragging more or less sand with it. This "drag" prevents the dentist from procuring a perfect casting, which is ensured in all cases by the use of Mr. Hawes' new flask.

The following cuts will illustrate the operation of this flask with very little description:

Fig. 1.

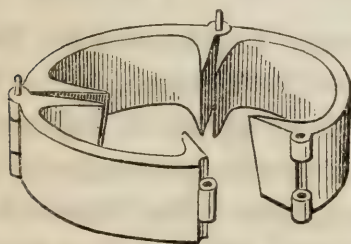


Fig. 2.

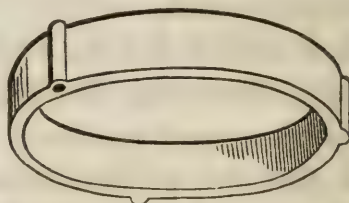


Fig. 1 represents the lower section of the flask, slightly opened, to show the joints. Fig. 2 is the upper section. When ready for use, the lower section is closed and confined by a pin, and the plaster model placed in it, as represented in Fig. 3.

Fig. 3.



If the model be considerably smaller than the space between the flanges, projecting in towards it, small slips of paper may be placed in the joint extending to the sides of the model, to part the sand when opening the flask for the removal of the

pattern. The sand may now be tamped around the pattern up to the most prominent part of the gum, and it should be finished smoothly around it, slightly descending towards the model, so as to form a thick edge of sand for the more perfect parting of the flask. The sand and face of the model must now be covered with dry pulverized charcoal, sifted evenly over the whole surface. The moulders keep it in a bag which they shake over the flask.

When this is done, the upper section of the flask is placed upon the lower, and carefully filled with sand. It is then raised from the lower one, which may then be parted, by removing the long pin, and the model gently taken away. When closed, and the two put together again and inverted, it is ready to receive the melted metal.

We have used this flask, for which we are indebted to Mr. Hawes, for some months; and have been able to make, by its use, more perfect castings than ever before, in the kind of cases for which it was designed.—*N. Y. Dent. Rec.*

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## ON THE USE OF TIN AS A BASE FOR ARTIFICIAL TEETH.

BY GEO. E. HAWES.

In the curative treatment of carious teeth, *tin* has been successfully used as a filling; and if it has ever been injuriously affected, it has been owing to the unhealthy secretions of the mouth. But we find that, in the absence of all the human teeth, as in the case of infants and old persons, the mouth and breath are more sweet, and the secretions more healthy, than where they are all or in part remaining. Consequently, with proper attention to cleanliness, pure tin would be much less liable to be injured by that agent, when used as a base for artificial teeth, than as a filling, provided that the work is well adjusted, and does not cause excoriation. Where the mouth is wounded, or unhealed from the recent extraction of teeth, the tin in contact with such parts, (as I notice in my experiments for temporary sets,) becomes rough and corroded by the action of the buccal fluids, which are always acidulated when the mouth is in this condition. To prevent this, when I do not design to gild the work, I use a thin plate of gold under the tin, where it comes in contact with the gum.



The peculiar charm which gold possesses, will always secure for it a preference, with many of our patients, to any of the inferior order of metals, even though they could be furnished with a superior article for real service and comfort, at less expense. Some of our profession also consider it as empirical practice, for no other reason than the *tinkerish* way in which they are constructed, and the cheapness of the material, and fear that if generally adopted, "this our craft is in danger to be set at nought."

But from all that I can learn, from extensive experiment and inquiry, notwithstanding the objections urged against it, I am still of opinion that pure tin gilded, or without gilding upon a thin gold plate, may be used in all cases of whole or fractional under sets of artificial teeth, with more comfort and advantage to the patient, and with less expense and labor to the operator, than is possible with the use of gold alone. The evidence which I have collected in favor of this system of practice, appears to me sufficient to establish the fact that it is no longer matter of inquiry or experiment, whether tin be admitted in our practice as a base for artificial teeth, but that it is a scientific truth, and that every practitioner will, upon examination, find it his duty to recommend it to his patients, as best suited to secure the advantages which they require.

The manner of constructing sets of teeth upon this plan may be varied in different ways, and produce the same results. For fractional sets, it will be necessary to prepare, in the usual way, a thin gold plate, and strengthen that part which comes in contact with the natural teeth which remain in the mouth. When the plate is adjusted, place the wax upon it, and cut it to the right curve and the proper height for the length of the teeth. The teeth are then to be selected and placed round upon the wax, in the proper position for use; but it is not material that they come down to the plate, provided all that remains in view is properly arranged, as all below will be filled with tin when the process is completed. Plaster and sand is now to be put on the outside of the teeth and plate, in the same manner as though they were to be soldered in the usual way. When this is done, the wax may be cut away, the teeth removed from the plaster, and a thin gold back put upon them. In backing them,

it will be necessary to bend the platina wires over the gold. The backs may even be soldered to the plate, either by the blow-pipe or soldering iron, thus forming one solid mass of tin, covering the wires, and imitating, as nearly as possible, the form of the alveolar ridge which has been absorbed. When this is done, the plaster may be taken away, and as much tin put upon the front as will restore what has been lost by absorption of gum and alveolar process. When the piece is properly trimmed and burnished, it makes a very strong and natural set of teeth, in appearance, while the additional weight given to it by the tin keeps it in place better than those made in the ordinary way.

Whole under sets of teeth may be cast of pure tin with great facility, dispensing with all metallic castings and plates of every kind, in the following manner:

After the first cast is procured, which should be made of plaster with a large proportion of sand, fit to it a plate of tin, as thick as can be well rubbed down with a burnisher, and as large as a plate of gold should be. The wax is then put upon the tin plate, and trimmed to the proper curve and height, as in the ordinary practice. Next arrange the teeth upon the wax, taking care that they do not come in contact with the plate, by about the sixteenth of an inch. It is not necessary that the teeth should be lined, but the platina wires should be bent divergingly. The teeth may be broken off with a hammer or ground as most convenient, and arranged in a manner similar to the following cut:

Fig. 1.



Fig. 2.



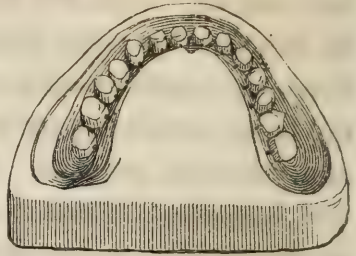
Then place a strip of wax around the bottom of the front side of the teeth and plate, concealing all the ragged ends and bad joints. All the wax is now to be carved to represent the natural gums, and to supply the required fulness. See Fig. 2.

Care must be taken to select such teeth as have their platina pins low, so that they may remain imbedded in the wax after



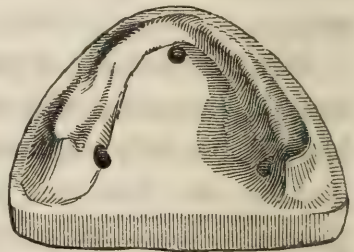
the carving. When this process is completed, oil the plaster and sand cast, and place the teeth and wax upon it, and pour over them more plaster and sand, so as to cover the whole with a thick mass. After the plaster is thoroughly hardened, the mould may be parted, and the tin plate and all the wax taken away, leaving the teeth secured in the plaster, as Figure 3 illustrates:

Fig. 3.



Apertures must be constructed in the plaster, into which to pour the melted tin, and also for the escape of the air, at points which will not interfere with the subsequent finishing, as marked in Fig. 4.

Fig. 4.



After washing the platina pins with a flux of muriate of zinc, the two parts of the mould must be securely bound together, and, to insure perfect success, the whole should be slowly heated to the temperature of the melted tin, which it is now ready to receive. Heat pure tin just sufficiently to flow readily, and carefully pour it into the place prepared. When sufficiently cool, remove the plaster, and prepare to polish, first with the file, then with different qualities of sand paper, which executes this work with great facility. Then finish with the same care as for gold. (In cases where gum teeth or blocks are required, the above directions cannot be explicitly followed, as the teeth must then be wholly supported at the base and on the inside.)

The patient should now wear the teeth a few days, so as to become satisfied that they are well adjusted, and that no subsequent alteration will be necessary, as it would deface the work were it done after the gilding.

To prepare the set for gilding, a thorough cleansing is necessary, and unless this is effectually done, the adhesion between the tin and gold will be imperfect, the gold separating from the tin in burnishing, and easily rubbing off. In this process, all grease must be removed by the use of alkaline solutions and afterwards water, then guarding against the moisture of the

hand by a glove, perfectly polish the tin with a jeweller's soft brush and prepared chalk. Again rinse in water, to remove all extraneous matter, and immediately place the teeth in the gilding solution. During the process of gilding, the teeth should be removed two or three times and burnished, both to give solidity to the deposit, and to discover imperfections if any exist. When the gold is sufficiently thick, burnish in the usual manner.

I have not fully decided in my own mind, that the constructing of sets of teeth without a thin plate of gold, as first described, is the best method; neither do I as yet feel prepared to speak positively as to the durability of gilding when worn in the mouth, as it is only about one year since I introduced this method into my practice. A few days since I made a thorough examination of the case, and could not discover any appearance of the gold wearing off.

This is for me sufficient encouragement to pursue the system until time shall render its true and impartial verdict concerning it.

The experience of Dr. C. O. Crosby, of New Haven, corroborates that which I have given, and has the advantage of much longer trial. In answer to some inquiries, he writes to me thus: "Mr. — has worn his under set, constructed upon tin, for nearly three years, and still perfect. Another patient, Mrs. —, has a set, which has been in use for two years, still in good condition, but has a silver base or plate, is filled in or loaded with tinner's common soft solder, galvanized with silver, a thin coat, and burnished, and then galvanized with gold, about three coats, and burnished each coating. There is about \$2.50 value of gold on each plate. I have about sixty plates made upon this plan. Soft solder plates look dingy unless well galvanized with gold. The galvanizing will stand if there is any gold put on, and they actually require less cleaning, from the fact of the gold being pure. There is no galvanic action when all the other metals are covered. I consider tin alone, without galvanizing, *better* and having *less taste* than *eighteen carat gold*, with copper, silver and gold for solder. I have never found a person that could not wear them."—*American Journal of Dental Science*.



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows:

"This case is considered worthy of a special notice, for the following reasons:—The exceeding vital appearance which the teeth maintain when exposed to the test of artificial light, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The manner in which the platina pins are inserted, is also adjudged to be a decided improvement. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on our next page cuts of our principal medals.

## GOLD MEDALS.



# THE DENTAL NEWS LETTER.

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APRIL, 1851.

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PHILADELPHIA, March 18, 1851.

MESSRS. JONES, WHITE & Co.

*Gentlemen*:—Enclosed you have a copy of my remarks on the propriety, as I deemed it, of rescinding the amalgam pledge, which was read before the American Society of Dental Surgeons, at their special meeting, held in Baltimore, March, 1850.

I have taken the liberty of sending them to you for publication in the forthcoming number of the News Letter, that the grounds upon which I argued for the rescision of the pledge may be fairly understood, as I am well aware that they have been much misstated, without intention on the part of any one to injure me or the cause I advocated.

By giving the article a place in your useful periodical, you will confer a favor on

Yours respectfully,

E. TOWNSEND,

Locust street.

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MR. PRESIDENT:—After very careful consideration, and in a spirit which I feel I can trust, and which I think my brethren will appreciate, I rise to call the attention of this body to a subject which I approach with so much apprehension, that I would gladly avoid it altogether, if I could do so, and preserve the full approval of my own feelings.

At your meeting held in August, 1845, I gave my signature to the pledge and protest against the use of amalgams for filling teeth. The *doctrine* of that pledge was and is in perfect accordance with my own views. I never used any form, or compromise, or evasion of the mortar, and I have not the least idea now that I shall ever change either my opinions or my practice in respect to it. Understand me, that I gave my assent in the fullest manner, to the idea and doctrine enforced by that pledge, and that nothing of change has passed upon my views in that regard since.



I stand *now* just where I stood then, in my judgment of the practice which I condemned.

But, sir, while I have kept faith to that pledge scrupulously, and intend to follow a conformable practice hereafter, I nevertheless desire, for other reasons, the pledge shall be rescinded, in such a way and under such conditions, as shall meet the views of all parties, if that can be done; and if it cannot, I shall have accomplished an end as important to myself—I shall have signified my own assent to the rescision of the rule, and for that only I am responsible. With this I shall be content, with *less* I cannot be. I give my voice for the abrogation of the pledge; I give notice of my readiness to repeal it in any way, consistent with the harmony, and honor, and well being of the Society, which can be devised; but I do not allow myself to offend against any of these interests, or violate any of the proprieties of membership to accomplish it. I simply put in my plea for the principle of liberty, and while asking this for *all*, and asserting it for myself, I will allow it to as many as may still differ from me; and I will not only allow them their liberty, but they shall have it in peace. I not only do not aim at reviving the controversies of the last five years, but I positively refuse to enter into any such strife. I take my own ground merely, and I leave every other inch of the wide world for the occupation of others who may desire a difference of opinion. Let me very plainly suggest a few of the reasons which govern me in coming to this conclusion, and taking the ground which I do. First, an authoritative decision of this question, backed by the penalty of expulsion from the Society for non-conformity, is, whether right or wrong, only a mode of effecting an object, and though right, may still be unnecessary. I do not deny that the Society may expel for malpractice as well as for malconduct. Societies have a right to take care of themselves, and they must do it in the way that seems wisest and best, and accordingly, I have tacitly, if not otherwise, consented to the enforcement of this penalty heretofore; but, as I said, it is only a mode of effecting a purpose, and it may not be necessary, though just; and again, though admitted necessary at one time, may not be so at another, under other circumstances. Five years have nearly elapsed since this law was enacted—five years bring great changes in conditions, though they alter no principles. Five years of experience,

under the sharp discussions and sharper government of this question, must have pretty well served all the purposes of such a measure. If five years have not done it, fifty cannot. If it compels nobody and convinces nobody, it must either be repealed as inexpedient, or left to grow obsolete upon your records—wear out it must, either because all resistance ceases, or because the resistance maintains its ground. But I really believe the Society does not now need the rule for any of the purposes which then induced its adoption. The Society has done all that men can do, the very utmost that can be required of it, to signify its opposition to the practice, and make it effective. It has published its condemnation abroad to all the world, and it has sacrificed the co-operation of men in other respects in every way worthy of its highest regards, and none the less worthy that they would not sacrifice a conviction or a principle honestly entertained, however erroneous it might be, if an infallible tribunal could be found to settle it. I do not think questions in natural science can be settled and decided by the legislation of majorities. Nevertheless, I do think an association has a right to protect itself against injury, and has a right to forward its legitimate intents and objects, by declaring its judgments, and enforcing them, too, in all matters of opinion and practice which concern its corporate existence.

It was to the expediency, the felt necessity of settling this vexed question, that I yielded in signing the pledge, refusing to sign which excommunicated men whom I think it an honor to call my professional brethren—and I would, just as they did, have refused compliance, and excommunicated the Society, if I had been convinced as they were.

An expediency, in the nature of things, must sometimes die out—it is only a contrivance to forward an end, and if the end comes it is useless, and if it does not come it is worse than useless. We took away no right of the expelled members when they were driven out, for we had the fundamental right to say on what terms we would hold fellowship and divide responsibilities with them, and if it was not over-logically constitutional, it was equitably constitutional, which was better. The majority did it, and it made the constitution itself. It did just what it wanted to do; and I know of no rule of morals or law which can hold any member of the majority any more than of the retiring minority, in a



voluntary association against his will. We took away no right of the expelled members, for we left them just where we picked them up, and broke no bargain which they had a right to rely upon. No man ever meant by entering into the Society, to endure any unexpected evil that might arise, simply because the constitution, in terms, gave him no power over it.

The Society is always as competent to take care of itself as when it is constitution making, and it has its choice to make the constitution answer in time of need, or dissolve the association, and form a new one. I think the shortest way is the best, provided men keep their temper, and just do what they must in the most agreeable and easy way to all the sufferers. Assert that any number of men, any way qualified, have the right to decide a question of opinion, or broad unchangeable principles, and I rebel, and refuse all part and lot in the minority. This Society has a right to say, we believe the use of amalgam to be malpractice. Every man of us has the individual right to say this. *I*, for myself, do say it, and the Society, as an aggregate, has certainly not forfeited its individual rights. It has, in fact, gained another right, because it has, by its union, encountered another necessity. It has a right to expel those whose practice discredits or endangers its reputation, or in any way hinders its purposes, or disturbs its peace or happiness, or crosses its caprices, or anything else necessary to it. The pledge goes the whole extent of these claims, but it goes no farther—for, if we gravely undertook to pronounce decrees, with pains and penalties, away out of our reach, in the free region of universal opinion and eternal progress, we should be only laughed at.

There has been enough of book burning, and heretic roasting, and creed crushing. Gallileo went down upon his knees, but still the world went round none the less; and although the government of Paris prohibited the use of tartar emetic in 1566, and then seventy years afterwards, upon further reflection, allowed antimonial wine to be put in the list of purgatives, it still held its right to turn people's stomachs in its own way.

I think I know what is wrong for me to do, and I must say so, and I will speak out upon what I believe to be absolutely wrong in itself, but I make no laws about it. I forge no fetters for the mind. Bless me, shall I say to every ship that is launched, sail

by this *old* chart, and see that you pursue no new passages, discover no new islands, touch at no new shores. If men will judge and govern other minds by their own, then the unknown comes to be the untrue, and stupidly enough, without pretending to know everything, they decide on the assumption that they do.

“Ah, (but say you) this *is* wrong.” Why, my dear sir, that may be the very thing which *you* do not know, and it is just because somebody else thinks it right that you are forging handcuffs for it. See, your opinion is disputed, yes, or else you would not be dissatisfied or fighting for it, and it is not unquestionable, for it is questioned. Wait till nobody disputes your point, and then seal up your decree; then only it will not be wrong, it will only be *useless*, and that is the best thing that can be said of settling questions of opinion by authority. If our pledge has served our turn, let us rescind it; let us not retain it because its opinion is right—for though this be so, still we must have some other reason, some convenience or necessity of our own to provide for by such dictation. This, I think, does not now exist. We have given the world notice of our doctrine, notice enough, and we have been severe enough in our way of doing it, and hereafter we neither need to keep our own hands tied, nor have our doors barricaded against the entrance of the freshest and boldest spirits who would seek our association. See, if we retain this pledge, we only govern and control ourselves, who need no such restraint, and we keep out brave, true men, who think differently; and if any of adverse opinion do come in under the yoke, it is in hypocrisy. That is the real disadvantage of embargoes upon opinion. They give rise to smuggling, and they restrain commerce at the same time—they spoil the legitimate, and encourage and compel the contraband trade. There are other questions on which we might as well divide as this—as, for instance, upon the treatment of the exposed dental nerve. I think it capital practice to destroy and remove it, and fill the fang to the apex. There are men over whom I would not have the presumption to claim superiority, and whose opinions I hold in high estimation, who forbid the practice—but I cannot surrender *my* convictions. I insist upon my own difference of opinion and practice, and will not willingly abandon them, and from this need of my own, learn to respect other men’s uncontrollable impulses. Have I reconciled



my own submission as well as the resistance of expelled members to the pledge? Have I taken the restriction from the supposed basis of everlasting principles, where it ought not to rest, and put it upon the ground of justifiable expediency, where it could stand? Have I preserved my respect for the right, while I advocate that *consistency* of principle which is above all *persistency* of action? Especially, have I duly honored the conscientious differences of views and wishes which may divide my friends from me upon the policy of this measure? I can truly say that all this, at least, I intended. My ultimate aim and wish is to relieve the association in which I hold an honored membership from the incumbrance of regulation which now regulates nothing needing restraint, and restrains only the progress and prosperity it was designed to promote. My immediate aim was to announce my own wishes to encourage others to come forward, if there be any, and above all things, to disburden myself of a seeming assent to a law which I would have abrogated, if it can be done every way rightly, and in proper regard for all our mutual relations and common objects. I protest again, that I will not disturb the harmony of this Society with this question. I say I will not even complain of the continued maintenance of the offensive resolution. It is in my heart to work for the Society's best interests, not against them. To me the time is fully come to let down the bars, and to admit men, *young* men, who will not endure the muzzle. Such I wish to attract, such I wish to secure. This thing of taking care of the soundness of the faith is more often the grumbling narrowness of declining and decrepitude than the vigorous and well-balanced strength of quickness of feeling. While we stand fondly guarding some darling little enclosure, which we have fenced in with fearful and ferocious vigilance, we might, as a body, be on a voyage of discovery for some new continent of knowledge, rich as the mines of Mexico to old Spain, and wide as this continent to ancient Europe. Will any friend move for a committee to consider and devise the measure which, perhaps, we are generally ready to adopt? I say, will some friend make such a movement? To put my motives beyond all suspicion of self-will and pertinacity of opinion, I decline to urge any practical step. I look to the men most active in favor of the measure, to the men ablest and boldest in its defence, let me say to the men

who have the most of private and personal feeling to sacrifice, to the men whose convictions against it are the deepest, to take the initiative—for, entertaining a real unfeigned respect for the opposite sentiment, and for those who hold it strongest, I would hesitate long before I would, even for the sake of the Society's immediate advantage, put my honored friends in a position that could give them pain. Nay, it is so. I believe with others who think with me. They, like myself, hesitate only because they cannot forget or undervalue the zeal and devotion and ability of the services which have been employed in their common cause, and then, perhaps, most warmly, when pushing this very measure which we now desire to supercede. Arrested by this feeling of deference for men who are entitled to all my regard, for all reasons of personal and professional worth, checked by the anxious solicitude I feel for the harmony and happiness of our assemblages, having said what was in my heart fully, though freely, I withdraw the wish a moment since expressed, and respectfully suggest that no action shall be instituted now, but that it abide a year's dispassionate reflection, and the issue and decision will be right and prudent, and true, too, I cannot doubt.

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For the Dental News Letter.

ON THE PRINCIPLES TO BE CONSIDERED IN THE PRESCRIPTION AND COMPOUNDING, AND THE CONSTITUTION OF POWDERS AND WASHES FOR THE TEETH AND MOUTH.

BY GEO. J. ZIEGLER, M. D.

MESSRS. EDITORS:—In glancing over the pages of the April number of a medical journal, published in one of our large Northern cities, I was much surprised to see a notice, purporting to be editorial, commendatory of a dentifrice and wash for the teeth and gums, the *formulae* of which are reserved as a *secret*, prepared and for sale by a practical dentist of that city. Now, this savors very much of quackery, and, from the editor of a medical journal, (I do not specify, because my design is not personality, but, exclusively, opposition to a pernicious principle,) we should expect something better, as the great object of its institution and publication is the diffusion of knowledge upon all subjects directly or indirectly connected with the *ars medicina*, and, of course, anything promising in the least for the mitigation or removal of the



inconveniences and ills of life, should be given freely for the benefit of the many, and not withheld for the aggrandisement of a few, it being altogether contrary to the great and liberal principles of the medical profession to use, support, or contribute, in any way, to the extension of secret remedies.

The treatment of the teeth and tissues of the mouth, by means of dentifrices and washes, is of the highest importance, not only for the preservation of the health and lives of individuals, but also of communities, and through them of future generations; for if persons in early life lose their teeth, the diminution of health will generally be proportionate, and, in consequence, the organization of the progeny of such persons will not be as perfect as it would have otherwise been; while the duration of the lives of both the parent and progeny will be considerably shortened. Statistics have, however, shown that life may be, and is prolonged, to a certain extent, by the use of the artificial substitutes, so admirably improved and adapted for the purposes of mastication, &c., at the present time.

The *objects* which the employment of powders and washes is desired to attain may be included in the two great classes of, first, the immediate or more direct; and second, the remote or ultimate. Under the former will be comprised first, the prevention and removal, when deposited, of the salivary calculus, (shown to be composed of animal and vegetable parasites and their debris;) second, the particles of food, and the products of their decomposition, from the cavities and interstices of the teeth and mouth; and third, the correction of the injurious tendency and action of the vitiated and abnormal saliva. This latter, when healthy, being generally alkaline in its reaction, although by some observers it is stated to be alkaline at one, and slightly acid at another period of the day, its salts consisting principally of the phosphates of lime and soda, the chlorides of sodium and potassium, and the lactates of soda and potassa, whilst in the diseased or modified condition its constitution assumes a highly acid character; hence its reaction with, and affinity for the calcareous matter of the teeth, causes a decomposition and diseased state of those beautiful, useful and essential organs, of an insidious, but certain, and sometimes exceedingly rapid character.

The other great objects of importance, or the remote, are the

preservation, or cure when diseased, of the teeth and tissues of the mouth, thus through them promoting the still more ultimate ones, of the functions of mastication, insalivation, digestion, and all those processes dependent upon this necessary preparatory condition of the food, and finally so essential to the existence and well being of the individual.

The *means* by which these desirable objects may be obtained are of two kinds, viz., first, by remedies addressed to the whole system, or general treatment; and, second, to the part affected, or local treatment. In numerous instances, however, the institution of both of these courses is required. Our intention at present is to discuss the latter only, or rather a branch of it.

The numerous powders and washes so highly lauded and recommended, for the preservation and cure of the teeth and mouth, may be classed, according to their properties and effects, under the three principal divisions of, first, the *physical*; second, the *vital*, or those acting through the vital influence induced; and third, the *chemical*.

In the first, *physical*, are included all those powders and washes, which act only mechanically, and by simple separation of the particles, or by dilution, thus breaking down and removing the matter with which they come into contact. One of the most prominent of the former of these is the powdered pumice stone, consisting principally, as it does, of silica, must necessarily, from its hardness, be destructive to those substances of less hardness than itself, which fact is exhibited, when employed as a dentifrice, by the destructive disintegrating influence upon the materials of the teeth. There are, however, some of this class, nearer in composition and hardness to the components of the teeth, which, if properly used, are undoubtedly very beneficial, examples of which will be mentioned subsequently. Of the diluents, the principal and most important is, obviously, water.

In the second division, viz., the *vital*, or those acting medicinally through the induced vital power, a prominent and very old domestic one is the tincture of myrrh. On an examination of its properties it will be found that it is a stimulant, tonic and astringent, possessing no other depurative properties than those belonging to such agents, hence can act only on the tissues of the gums and cavity of the mouth, which it undoubtedly does, in



common with all similar washes and powders, they being composed of analogous substances, having the same general properties; and in this way they can be of service only by promoting a healthy condition of the tissues to which they are applied, assisted by the mere physical action of the fluid, and the brush, or other article used in cleansing the mouth.

The third division, or the *chemical*, will comprise all those agents acting chemically, the acids and alkalies being the principal. In almost all of the dentifrices, and many of the washes, so extensively advertised and lauded at the present time, there is a portion of acid, which, although it acts very effectually in temporarily cleansing and beautifying the teeth, by whitening them, does so at a fearful cost, by destroying the integrity of their structure; these agents having generally a great affinity for lime, which, it is well known, is the basis of the osseous part, and of course the teeth inclusive, of the animal organism; hence, in consequence of this great attraction for that substance, they seize upon and unite with it, forming a salt of the particular acid employed; thus gradually the calcareous matter is broken down and removed, producing that crumbling condition often resulting from an highly acid state of the salivary fluid, and so well known to practitioners, and leaving, frequently, the animal tissue greatly diseased, and so exceedingly sensitive, that the unfortunate possessor of such teeth suffers almost as much, though not so severely, as if the dental pulp was exposed; and requiring for its successful removal, preparatory to filling, the utmost skill and patience of the operator. Consequently the acids are entirely objectionable, for there does not appear to be a single case in which they would be so strongly indicated as to justify the risk of the injury certainly resulting from their employment.

The alkalies, on the other hand, seem to be peculiarly appropriate in the majority of, if not in all, cases, for, from the constant changes in the fluids of the mouth, arising from the local and general modifying influences upon the functions of special organs, as well as of the system generally, particularly in this country, the secretions are consequently continually varying in their character, and none probably more so than that of the saliva, it being in health, as before stated, usually alkaline, but when modified becoming most generally of an acid reaction, the intensity of this

being commonly in accordance with the modification of the salivary fluid, easily tested and exhibited by test paper ; hence it is evident, that by the use of the alkalies, thus neutralizing the acid of the saliva and substances decomposing in the mouth, this destructive process of decomposition and disintegration of the teeth will be prevented or retarded, if not completely arrested.

It would appear, however, from an investigation of the properties of these various classes of remedies, and their relation to the conditions in question, that none of them separately fulfil all the indications which are required and desired in their employment.

Now, in the successful prevention and treatment of disease, there are several indispensable preliminary points to be ascertained and understood, and first, what are the objects to be attained ; second, the mode and means of accomplishing them ; third, the true indications requiring to be answered ; and fourth, the fulfilment of those indications by proper remedial agents, possessing suitable properties, or by those measures included under the term of hygiene.

Having glanced at the former of these, it will now be proper to consider the latter, viz., the true indications to be answered, and the fulfilment of them ; and in the subject under consideration there seems to be several, each one of which is of the greatest importance, and frequently inseparable. The first is, the removal of those substances which accumulate around the teeth, and in the mouth, by a mechanical action, being in many cases all that is required ; this is furnished by the frictional and dilutive action of brushes, water, &c. ; secondly, a vital action on the tissues of the gums and mouth, thus preserving, or regaining, when lost, their tonicity, which may be secured by means of stimulants, alteratives, and depuratives, such as astringents, very valuable ones of which are galls, or a purer astringent, tannin, alum, &c. ; tonics, as cinchona ; and alteratives or depuratives, as chloride of soda, muriate of ammonia, &c. ; the third, a chemical action on the fluids of, and the contaminating principles from the decomposition of substances in the mouth, to combat and modify, if not to completely overcome, their injurious tendencies and actions ; and, as the acids are these destructive agents, the resort to those remedies which would neutralize, and thus supply them with the same or a similar article to that which they would otherwise



derive from the teeth, would be indicated; this, it is obvious, could be furnished by the alkalies, the best for the purpose being soda and potassa. These, in addition to their neutralization of the acids of the fluids of the mouth, seem to exert a destructive and decomposing power over the parasitic deposits about the teeth. Although, according to the experiments of Dr. Bowditch, "soda, ammonia, and various other popular detergents, did not affect their vitality in the least," yet "the application of soap appeared to destroy them instantly." Now, the hard soaps principally have for their base soda, and as the "purest white soap" is recommended, it necessarily follows that, to be so, it should be divested of all impurities; hence, it must consist almost exclusively of the base soda and the fatty and oleaginous matters, or rather their acids in union. The vegetable oils being generally employed in the manufacture of the finest soaps, therefore they are a purer compound of oleic acid and soda, or an oleate of soda, though they are mostly associated in varying proportions with the other fat acids. Consequently it is presumed, from the known properties of fats and oils, and their common acids, stearic, margaric and oleic, that they will not destroy or remove these salivary deposits; hence, the beneficial influence of soap would appear to depend upon the base soda, or probably the salt resulting from the combination of the acids with the alkali: these bodies frequently possessing properties entirely different from their constituents, which, by their action upon and reaction with the components of the calculus, (it being principally composed of phosphate of lime,) causes a dissolution and decomposition of that substance with the consequent formation of the respective salts of phosphate of soda, and oleo-margarate or stearate of lime, according to the proportions of these several acids.

It would seem, from the fact of the alkalies alone being incompetent to the dissolution and removal of these accumulations, that it requires for their action the interposition or assistance of some higher attractive or decomposing power than they separately possess; in other words, that single elective affinity is not adequate to the induction of the reaction of these agents, but for the successful decomposition requiring the superior influence of double elective affinity, similar to many other conditions necessary for chemical changes. Hence, instead of the simple alkalies, the

employment of their salts would seem to be most appropriate; thus, the carbonate of soda, or potassa, soap, &c.; those containing the more active acids being obviously contraindicated.

Taking these views into consideration, therefore, it becomes necessary, in accordance with the indications presented, and their fulfilment, to resort to those substances possessing the peculiar properties required, and combining them in such proportions as would be most appropriate to the special condition under treatment, although for general use the components and proportions may be so arranged as to be well adapted to the majority of cases.

In accordance with the above described principles, I have always endeavored to suit my remedies to the particular case presented, modifying the treatment according to the circumstances, and with a success with which I have been much gratified. But for general application I have found the combination of the several agents, as expressed in the subjoined formulæ, very useful. That for a dentifrice which I ordinarily recommend and prescribe, and to the beneficial effects of which I can testify, from an almost daily personal use for years, is the following, viz:

R. Testa Præp.,	3viij.
Gallæ Pulv.,	3iij.
Sodæ Carb. Exsicc,	3ij.
Cochineal,	3ss.
Alum,	3j.
Ol. Rosæ,	gtt. iij.

M. et. ft. pulv. for dentifrice.

The teeth should be cleansed with this powder at least once a day, and that period should be at the close of it, just before retiring for the night, as it is so much the custom, among young people, particularly in the evening, to indulge in those articles, such as cakes, ice cream, sweetmeats, fruit, &c., which have a tendency to a rapid change, being converted into those agents so destructive to the teeth. By removing, however, immediately before retiring, all those particles of the various materials of the food which have collected in the cavities and interstices of the teeth, this injurious action will be prevented, whilst otherwise they will remain and undergo those changes peculiar to them, and produce, during the period of repose of the system, much more injury than in those hours when the system is active and the



secretions more abundant, thus, from the inconvenience and by dilution, exciting and facilitating an action for their removal.

The following is the formula for a Wash which I frequently use, and with great advantage, in those cases of chronic, relaxed, and depraved condition of the gums often accompanied with ulceration.

R. Liq. Sodæ Chlorinat.,	f ʒss.
Tinct. Gallæ,	f ʒiiss.
Ammonia Muriat.,	ʒij.
Mel. Opt.,	f ʒss.
Aquæ Rosæ,	f ʒiiiss.
Misce.	

This should be used two or three times a day, according to the severity of the disease; and if there should be much irritation of the tissues of the mouth, a sufficient quantity of any anodyne, not incompatible, might be added, such as the tincture of aconite, or muriate of morphia, although this latter would be apt to react with the astringent. In place of the tincture, an infusion of galls, of oak bark, or of tannin, might be substituted where they were more convenient; the two former being modifications of the latter vegetable astringent principle.

Very frequently powders or lotions, having for their astringent principle alum, or acetate of lead, will be found of great service; the former particularly, in those conditions termed apthous. The following I have never known to fail, in cases of local apthæ of a comparatively mild character, and not dependent upon any great derangement of the general system, as it very frequently does, which, of course, requires, in addition to the local, the institution of general treatment.

R. Alum Exsicc.,	ʒss.
Sodæ Borat.,	ʒj.
Saccha. Alb.,	q. s.
M. ft. pulv.	

This may be sprinkled occasionally on the ulcerations, and by the dissolving agency of the saliva, and the action of the tongue, cheeks, &c., it will be diffused throughout the mouth; and in cases of children it will be found very appropriate, as the sugar

gives it an agreeable taste, and sufficient should be used for that purpose, thus rather causing it to be desired than rejected.

The solution of Acetate of Lead is more appropriate in those cases of swelling and ulceration resulting from the inordinate effects of mercurial salivation.

I have thus given a few examples of those remedies which are undoubtedly efficacious in numerous instances, but there are others which are equal and superior, in many respects and conditions, and are required and frequently employed by the physician in those cases which it is his more particular province to treat.

In conclusion, I must apologize for the errors of expression, and deficiencies of arrangement in this paper, having written it very hastily, and on the spur of the occasion, and although beauty of diction and order are very desirable, yet *facts*, even if expressed in a plain, inelegant, and irregular manner, are still vastly *most important*. If, therefore, these desultory remarks should elicit more correct views, and induce a more liberal feeling with regard to the promulgation of information upon these and other important subjects, thus assisting in disseminating knowledge, and in breaking down and removing the selfish, illiberal, and injurious practices and principles of those engaged in the support and sale of secret remedies, the design of this article will have been accomplished.

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For the Dental News Letter.

## AN ESSAY UPON CLASPS FOR RETAINING PARTIAL SETS OF ARTIFICIAL TEETH IN THE MOUTH.

BY CHARLES A. DUBOUCHET, M. D.

[Read before the Pennsylvania Association of Dental Surgeons, February 7th, 1851.]

MR. PRESIDENT,—In accordance with the rules of this Society, it has been your pleasure to appoint me to prepare an Essay on some subject relating to our profession. That much good may be accomplished by following up this method, every member of this society must feel convinced.

The high tone of improvement pervading the dental community demands at our hands a continuance of efforts to keep in the onward track.



The "Dental News Letter" affords us such an excellent channel to diffuse throughout the land whatever information we may have to impart, that we should not neglect to improve the opportunity. The papers published in it upon "Filling Teeth," and "Mechanical Dentistry," as well as upon other subjects, contributed by our members, have shed upon the Pennsylvania Society of Dental Surgeons a lustre, in the bright effulgence of which any dentist may *well* feel proud to bask.

Under such circumstances, the task allotted me becomes important, and such precedents render me conscious of inability. Still, Mr. President, deeming it a duty and an honor, and relying upon the indulgence and proverbial kindness of our members, I shall proceed to make a few remarks.

Lately great improvements have been made in Mechanical Dentistry. First in the rank we notice atmospheric plates, used for the insertion of one or two teeth, in the place of the old-fashioned plates with clasps; and our fellow member, Dr. White, is among the first to have given his attention to this new mode of insertion.

This seems to be, indeed, an improvement, and the more we have investigated the matter, the more we have become convinced of its utility. Thousands of *healthy—sound—beautiful* teeth have been sacrificed, without remorse, by our professional predecessors, in their now obsolete practice of making their clasps as small as possible.

A case in point has just come under my notice; allow me to exhibit one of the victims to that erroneous custom of the dental dark ages. And would you believe it? the subject of this malpractice is not a venerable grandmother, she is an interesting young married lady; showing that the abominable practice of clasping cuspidati is yet rife in some parts of this continent. A few years have sufficed, in this case, to destroy, to all intents and purposes, one of the most important teeth in this patient's mouth, besides causing her exquisite sufferings whenever partaking of sweet or acid aliments, cold or warm drinks.

This illustration, if known to any conscientious dentist, would, I am sure, deter him from constructing similar contrivances.

The effect of narrow clasps is likewise injurious upon bicuspidis and molars. We well remember a case, which occurred some

two years since, in which four molars and two bicuspid were destroyed.

In order to conceal them from sight, the clasps were fastened upon the second molars, and made of small, half round wire, running along the first molar and second bicuspid on either side of the mouth.

The plate was very narrow, and the whole weight of the apparatus devolved upon the back teeth. In a short time violent inflammation of the gums supervened wherever the wire touched; palliatives were resorted to, and the patient not being very sensitive, persisted in wearing the teeth.

In a few years, one of the second molars having fairly been drawn from its socket, dropped in the mouth, still clasped by the wire, and caused the patient to apply for advice. Upon examination, we found the roots of the five remaining teeth exposed to their very apex, the lingual side of the alveolar entirely absorbed, and each tooth had a groove as nicely cut into it as might have been done with a saw.

In order that the two preceding illustrations be not supposed to be extreme cases, and of unfrequent occurrence, we beg leave to allude to another, in which the two canine teeth were destroyed although the plate was large. Eighteen months sufficed to expose freely to view the nerves of both cuspidati. Another set of teeth was now made, with two more teeth, and clasped, as previously, to the nearest teeth, the first bicuspid on either side, and the result was similar.

Both this, and the artificial piece alluded to in the preceding illustration, were executed in a workmanlike manner, and evinced great mechanical skill, which, however, could not atone for want of judgment, and the pernicious effects of the small clasps.

Some three years ago we were consulted by an Eastern lady, who a few years previous had a lateral incisor replaced by the present arrangement. Any respectable practitioner might be puzzled to tell in what manner such a contrivance could possibly be retained in the mouth. Still, it was tolerated there nearly three years, and particular attention was only called to it from extreme sensitiveness in the canine tooth adjoining.

Upon examination, we found this appendage wafting to the



gentlest breeze caused by the breath of the fair patient; considerable *engorgement* of the gums above and around the adjoining cuspidatus, and a sort of ring beneath the loose edge of the gum, as often produced by tartar. Still we could not account, from the construction of the artificial tooth, how it was so tenaciously held in its clapper-like position.

However, the application of a scaler to the supposed ring of tartar, showed it to be metallic.

The dentist had cut the gordian knot. Unable to make the artificial tooth remain in the mouth, he had tied it fast to the next tooth by means of two turns of fine silver wire. The result was a complete exposure of the nerve, and consequently the loss of a valuable tooth, which it became our duty to replace.

These instances have multiplied to an infinite number, and are daily related to us by patients in all their details, losing nothing of their beauties by circulation, and thus:

“Mr. So-and-so is no better than he should be. He ruined that lady’s teeth. He ought to be sued for damages. I would not have suffered him to treat me in such a manner.”

There may or there may not be truth and justice in these complaints; the dentist may be ignorant, eager for gain, or unprincipled. But it also sometimes happens that the patient is the very cause of such mischief being inflicted, by beating down the dentist’s price—wishing him to insert a set of teeth for less than actual cost of materials, if made in a professional manner.

In such a case, we can neither entertain sympathy for the sufferer, nor make any apology for the dental practitioner.

We are fully convinced that narrow clasps are injurious, and have not the least doubt that the larger number of the profession entertain the same opinion.

Of late years, respectable dentists have abandoned the practice of clasping with small, half round wire, and have made it a point to use a clasp as broad as the tooth would permit. The size of plates has also increased; and under such modifications, we cannot say, from actual experience, that teeth have been sacrificed, nor do we deem it likely. Still, it must be obvious that, in dispensing entirely with clasps, when the nature of the case admits of it, we eradicate even the shadow of a doubt, in the patient’s mind, as to the propriety and safety of inserting and wearing artificial teeth.

For the Dental News Letter.

## REPORT OF THE PROCEEDINGS OF THE PENNSYLVANIA ASSOCIATION OF DENTAL SURGEONS.

A stated meeting of the Association was held December 3, 1850. President, Mr. C. C. Williams, in the Chair.

Minutes of previous meeting read and approved.

A report from the Librarian, Mr. S. S. White, showing the condition of Library and Cabinet, was now read and accepted.

Some discussion now took place in reference to establishing a Dental School in Philadelphia.

The relation of several very interesting cases of the retrocession of the gums, the appearance of them, and structure of the teeth, the treatment, etc., was now given by several gentlemen.

Dr. J. D. White urged upon the members the great necessity of having one or more essays for each meeting of the Association, and showed clearly the profit that could be derived, and the instruction imparted, by such a course, and he hoped all would feel called upon to prepare an address.

The President, Secretary and Treasurer, were appointed an executive committee to transact all the secular business of the Society.

The Librarian was instructed to subscribe for several periodicals. Adjourned.

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### TUESDAY EVENING, February 14, 1851.

A stated meeting of the Association was held this evening. President in the Chair.

Minutes of the preceding meeting read and approved.

Committee on the progress of the Association reported verbally, and were continued.

Examining Committee offered the names of the following gentlemen for membership, Messrs. Elisha Townsend and J. L. Suesserott, when, on motion, the rules were suspended, and they were unanimously elected.

Some discussion was now had on a proposition to meet monthly, instead of quarterly, which subject was finally postponed.

Dr. DuBouchet read an Essay upon "The use of Clasps for retaining partial sets of Teeth in the mouth." (It will be found



in the present number.) Some discussion ensued on the subject of the essay, in which many members participated, and which occupied the balance of the evening.

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TUESDAY EVENING, April 1, 1851.

A stated meeting of the Association was held this evening. President in the Chair.

Minutes of the last stated meeting, and also of a special meeting held March 4, 1851, were read, and, after some correction, approved.

Secretary read a communication from Dr. Parry in relation to the charter of a Dental College.

The Examining Committee offered the name of Mr. William Fouche, of Philadelphia, for membership, when, on motion, the rules were suspended, and he was unanimously elected.

Some discussion now took place in relation to the treatment of the dental nerves, in which several interesting cases were instanced.

On motion of Dr. J. D. White, it was Resolved, That the Association should hold a special meeting on the second Tuesday in May. Adjourned.

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For the Dental News Letter.

#### THE USE OF THE FORCEPS.

MESSRS. JONES, WHITE & McCURDY:—You will pardon me for once intruding a few lines upon your patience, for an insertion in your valuable Dental News Letter. I have thought, for several months, I would prepare a communication on the use of the above instruments; but never setting myself to the task, the paper has been deferred till the present. Many have been the circumstances that have, from time to time, suggested to my mind the propriety of writing such an article. From the “many,” I will select a few.

Mr. P. called to have a tooth extracted. Upon my taking the forceps, he turned away his face, and raising his hand, exclaimed, “No! no!! you don’t put those things into my head. Dr. A. came near taking it off with just such things as those.” I succeeded in convincing him that, from my variety, I had the instrument that was perfectly adapted to the tooth affected; consequently he permitted me to extract the tooth, and so astonished

was he to see the tooth firmly in the beak of the forceps, and removed with so little pain, that his first ejaculation was, "Jerusalem!" (and putting his finger upon another decayed tooth, said,) "there, just take hold of that." I was in Doctor A.'s office a few days after, and being familiar with him, asked to see his forceps. He produced one solitary pair only; and if such instruments were continually upon my table, I can conceive of no case in which I should require their use, and in fact but very few in which they would be in the least degree applicable.

Dr. T. informed me that he drew almost entirely with forceps. On producing his instruments, I found only two pair, one for the inferior bicuspid, the other for the left inferior molars. These forceps were of good shape and style for the teeth to which they were adapted. But he, honestly enough, assured me that he extracted more molars with the bicuspid instrument than with the other pair, saying, "he found them more handy for many teeth," convincing me that he had no correct knowledge of the use of the forceps, neither that they were applicable to certain particular teeth and no others.

Doctor S. has some half dozen pair of forceps which are of good manufacture. In conversing with him, a short time since, I found he was not aware of the reason of the forceps being of different shape, supposing it was merely to give greater variety, and be prepared for *irregularity*, rather than be prepared for *all* the teeth in their *regular* position. He had not the first idea why the beak of one side of a superior molar forcep is pointed, and the other in the form of part of a circle, &c. He would as soon try an inferior molar or a bicuspid with it as any other, often making "poor suffering humanity" suffer more, and furnish another objection against the use of a good instrument.

A dentist in your own State, of several years' practice, has a requisite number of forceps, but they are of such size and form that the key, properly made and applied, would be preferable. He often uses the key, and says there are many teeth that can be much better extracted with it than with the forceps. Were there no better instruments made than his, I would say the same; but happily that is not the case. Could I have such a set of forceps *given* me, if I would use them, I should consider it no temptation; for sooner would I go back to the *ancient* custom of using the key.



I noticed an article in the "News Letter," Vol. III., No. 3, "On the use of the key," which also reminded me of the call for something to be given to its readers on "the use of the forceps." It has been twelve years since I commenced extracting teeth, at which time I was studying medicine. Of course, I used the key, and continued its use till I took my degree, after which I embraced an opportunity of learning dentistry of Edson Carr, M. D., of Canandaigua, a thorough and scientific gentleman, and to whom I am under lasting obligations for favors and instruction. It was then that I first became acquainted with the "use of the forceps." At first I continued to prefer the key, till perceiving, from time to time, how dexterously teeth were extracted with the forceps by his hand, I was induced to give them a further trial. I found, as I became more acquainted with the forceps, the estimation I had for the key grew less and less. I have now abandoned its use altogether. During the last eight years I have drawn only three teeth with the key, and those being from necessity, not from convenience, I being in the office of a neighboring physician, or some such circumstance. I do not set up myself to be a teacher in extracting teeth, but to my mind, extracting them with a key is bad practice, and much more turning them *in*, as recommended by some, and I have never failed of convincing those who see me extract teeth with my forceps, of their superiority over the key, and of their equal purchase and power, and particularly that their action is much more under the will and government of the operator.

Teeth being set in the form of an arch, the shape of the crowns, the curve of the fangs, all indicate, philosophically, that they should be drawn from within outwards. After having practiced some three years, I had occasion to apply to a neighbor dentist for the extraction of a superior bicuspid. Brother dentist took up the key, and commenced padding the fulcrum with a napkin. Upon my asking if he were going to draw it with the key, he replied, "I will convince you that it is not every tooth that ought to be drawn with forceps." Then bringing the key nearer my mouth, in position to place the fulcrum on the inside, again I interrupted him, but his reply was, "wait a moment, and I will show you how it's done." Well, he did, and "with a vengeance." The point of the fang curved outwards, as is generally

the case, and, setting aside the extra force used in breaking in the arch, any mechanic would naturally judge which way the tooth should be turned, following. The swollen and inflamed roof of my mouth for four weeks was a constant witness, for me, of the absurdity of using the key, of turning the teeth inwards, and of placing the fulcrum on the internal alveolus.

I not unfrequently have teeth to extract which have been *tried* by some other operator, and often the mangled gum and crownless fang show that the key has been used, and also how unfit for the purpose, especially when the tooth is easily removed with forceps, and the patient affirms how much more severe the "*trial*" (for surely it was a trial,) with the key than the *extraction* with the forceps.\* As yet, neither myself nor my patients have had any cause to regret the abandonment of the key, and the use of the more natural instrument, the forceps.

Yours truly,

E. N. CLARK, M. D.

Beloit, Wis., Jan. 27, 1851.

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For the Dental News Letter.

#### A NEW ANÆSTHETIC.

MESSRS. EDITORS:—Permit me to call the attention of your readers to the following article, which appears in the March number of Silliman's Journal, descriptive of a *new anæsthetic*, and its *superior efficacy* in the *production of local narcotism*. In the event of the further confirmation of the properties assigned to the agent therein described, it will prove to be, as it is, so far as tested, evidently one of great power; indeed, superior to any which we have heretofore possessed, and will be of almost incalculable advantage and benefit in the treatment of disease and the performance of operations, and particularly appropriate to those included in the practice of dentistry, the application to which is the design, more especially, of the present notice. Its properties rendering it peculiarly adapted to the treatment of the dental pulp, and that exceedingly sensitive condition of the animal tissue so often exhibited in the decay of the teeth, and the effectual and painless removal of which, preparatory to the more final operation, presents obstacles of no mean importance, as those who have it to perform can well understand and appreciate;

\* It is with teeth *most decayed* that I find forceps most beneficial.



therefore, anything favorable to the successful removal of these difficulties should be considered of the highest importance, and, I hope, will be acknowledged of sufficient, to *excuse this mode of directing attention* to a remedy so promising.

Respectfully yours,

GEO. J. ZIEGLER.

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 “*Anæsthetic Action.*—(L’Institut, No. 886.)—M. Aran has made experiments on the *anæsthetic action* of certain agents used as an *external application* to the *skin*, and has found that the *best material* for this purpose is *chlorated chlorohydric ether*. The sesquichlorid of carbon may also be used; but whilst the *ether operates effectually in a few minutes*, at least two hours are required to produce insensibility with the sesquichlorid. To produce the desired effect, from 15 to 30 drops of the pure chlorated chlorohydric ether suffice; they are put upon the part in pain, or upon a piece of linen cloth, which is to be immediately applied to this part, and the contact is maintained by a bandage, and *quickly the pain is relieved*. A pomatum of this ether may also be employed, consisting of four grammes to 20 of suet; or if of the sesquichlorid of carbon, four of this agent to 30 of suet; it may be used either with friction or without. *The insensibility is not simply cutaneous, for it gradually extends to the parts beneath.*

“*The chlorated chlorohydric ether is obtained by the action of chlorine on hydrochloric ether*, by which compounds containing chlorine in increasing proportions are formed, isomeric with the series of bicarburets of hydrogen, and identical with the same series in the density of the vapor for corresponding compounds. It is a colorless liquid, of an ethereal aromatic odor, analogous to chloroform, and a sweetish and even peppery taste at times; hardly soluble in water, but wholly so in alcohol, sulphuric ether, and most of the fixed and volatile oils. It is without action upon paper of tournsol; is not inflammable; has a variable density and a variable point of ebullition, oscillating between 110° and 130° C., showing that the material is rather a mixture of several ethers than a single simple substance. *All the chlorated chlorohydric ethers have the same anæsthetic properties*, and they cannot be separated completely from one another.”  
*Amer. Jour. of Sci. and Arts*, March, 1851.

For the Dental News Letter.

## A NEW IMPROVEMENT IN FORCEPS.

As there are few operations more dreaded than the extraction of teeth, so there are few in which more skill has been employed in constructing instruments for performing them. The forcep, that superseded the turnkey, has been improved by adapting the grasping points to the forms of all the different teeth, and by curving them so ingeniously as to reach every part of the mouth. In these respects the instrument has undoubtedly reached perfection. To make the forcep a perfect instrument for the extraction of teeth, I believe it is only necessary to add one more to the many beautiful improvements which have been made to it within a few years past.

In applying forceps to many teeth, especially those that are much decayed, a difficulty is experienced in opening and closing them with the requisite facility. The fingers, after being employed to open them, must be withdrawn, in order to grasp the handles and assist the retracting power; if at this stage the tooth breaks, the fingers must again be inserted between the handles, to open them for another grasp. Few patients have the endurance to suffer the instrument a long time in the mouth without disturbing the proceedings of the operator, if not frustrating his design entirely.

This want of command over the forceps seems not to be obviated by a spring, that only acts by holding the handles apart from each other, as they are thus often made to open at a critical moment, when not desired.

To obviate every difficulty in the use of forceps of this nature, I have applied bows to the handles, nearly similar to those of the most perfect of the large shears used by tailors. These bows, when properly adapted to the shape and size of the hand, enable the operator to open and close the forcep instantaneously, and be at the same moment prepared to use all his retracting force to the greatest advantage, and if the tooth breaks, to renew his hold with a facility unattainable with an ordinary instrument. There is also an advantage gained by transferring a portion of the retracting power to the bows of the instrument, as that much force is abstracted from the crushing tendency of the jaws of the forcep—a circumstance of considerable importance where a tooth



is quite hollow, or its substance brittle, and at the same time firmly set in the jaw. I believe that reflection will convince the profession of the utility of this addition to the forcep, and if that does not suffice to convince, the experiment of using them, I am sure, will, as in practice they have surpassed my highest expectations.

M. DEPUY, Dentist.

Pittsburg, Pa., February, 1851.

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*Filling Teeth after the Lining Membrane has become Exposed.*—Dr. W. W. Codman, of Boston, informed us, while on a visit to that city last summer, that he had been in the habit, for several years, of filling teeth, under certain circumstances, after the lining membrane had become exposed, and with very great success. He also stated that he was of the opinion, from a number of experiments which he had made, that the pulp of the tooth, when the operation is successful, sooner or later ossified. He presented us with several teeth in which this had actually occurred.—*Am. Jour. of Dental Science.*

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#### OSSIFICATION OF THE PULP OF THE TEETH.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—Seeing my name in an article copied by you in the Dental Journal, I beg leave to make some explanations in regard to it. Dr. Harris, editor of that Journal, seems to have forgotten the most important part of my statement, which was that I waited until the ossification had taken place before I filled the tooth. My principle is, to excite ossification, as surgeons sometimes do to fractured bones when indolent. And I have succeeded in doing it, in many cases, where the dental pulp is healthy, even though wounded. By cleansing the cavity, as if for filling, then protecting it with cotton from the air, and occasionally removing the cotton and lightly re-scraping the bone, a deposit, in time, will take place nearly as hard as enamel, when the tooth can be filled and retain its vitality. Twelve years' experience in this operation has proved this fact to me, that, under favorable circumstances, it can be done.

W. W. CODMAN.

Boston, Dec. 11, 1850.

# THE DENTAL NEWS LETTER.

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APRIL, 1851.

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We must beg the indulgence of our subscribers for the late appearance of the present number. We delayed its issue in the hope that we should be able to give our readers some description of the quantity and variety of dental work in the London Exhibition or "World's Fair," through one of our partners, who has gone to Europe for the purpose of gaining all the information possible upon those subjects in which the profession are interested, and also to increase our already ample means for the supply of all things necessary to the dental practitioner. We have been disappointed in the communication, from the fact that everything in the "Crystal Palace" was "in confusion," but hope to be able to give something more interesting in our next number. For the present we refer our readers to the letter:

LONDON, April 4, 1851.

GENTLEMEN,—I paid a visit to the Crystal Palace yesterday afternoon, and was disappointed in finding everything in confusion. But few goods are unpacked,—no fine or small articles.

Some immense bronze statues from Prussia—one of a lion, weighing eight tons—and some plaster figures, etc., were all that were to be seen. I noticed some beautiful specimens of stained glass in the galleries, which were being arranged.

The building itself is not completed, as a considerable portion of the sides are without the glass; but the expectation is, that it will be finished by the 1st of May; still, the exhibition will not be complete before June.

Representatives of nearly all nations are to be found in the building, all busily engaged in having their goods put in proper places.

The building itself equals the most glowing description ever yet given of it, and is really a world's wonder.

I have been informed that the goods from the United States were very roughly handled, in shipping and unshipping from the St. Lawrence. Cases and models broken, boxes stove, and all



from the most evident carelessness in stowing, or in allowing parcels to drop down the hold of the vessel.

I find, on inquiry, that bone bases or blocks are still used to a considerable extent in this country. I was shown a machine for getting up shell bases, which was patented, making it cost some £10, or fifty dollars. I thought, while looking at it, would it be possible to sell one of them in the United States?

The *tube teeth* are chiefly used here, although the dentists will generally acknowledge that the American teeth are the most permanent. But I must close, having occupied quite enough space already with the very little I have to communicate.

Yours, truly,

J. R. McCURDY.

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So much interesting and valuable matter has accumulated upon our hands, that we have concluded to extend the present number (with the view, probably, if circumstances warrant, of a permanent enlargement in the next volume,) by the addition of several pages, believing that, by so doing, our desire, as manifested for the advancement of the profession, will be appreciated.

Those who may make, or become acquainted with inventions or improvements connected with, or applicable to, the practice of the dental art, will not only promote their own interests, but also those of the profession, by informing or furnishing us with a written description as soon as possible. Everything so furnished will be duly acknowledged, and receive the most careful consideration, and a suitable place or notice in the News Letter; and by continuing the system we have hitherto practiced, of procuring *every new improvement and invention* as soon as practicable after its appearance, we shall be able to supply, in addition to our *Premium Teeth*, every article or material which may be needed by the profession, and hope, in this way, to prove our title to the purport of our establishments, viz. Dental Depots, or depositories of everything needed by the dentist, either in theory or practice.

All orders, as heretofore, will be promptly and carefully attended to, and filled up with the *latest manufactures* and best materials that we possess or can procure. And to secure more

effectually the wishes of our customers, we invite *definite orders*, so that there shall be no misapprehension on our part with regard to the peculiarities and character of the articles required.

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*Ether and Chloroform; their Employment in Surgery, Dentistry, Midwifery, Therapeutics, &c.* By J. F. B. FLAGG, M. D., Surgeon Dentist, Member of the Rhode Island Medical Society.

We have derived much pleasure from the perusal of this little work. It is a very good resume of the history, modes of preparation, and chemical constitution of ether and chloroform, and the constitutional and other effects of their inhalation, as observed more particularly by the author upon the human economy, showing the advantages of their employment preparatory to the performance of surgical operations, or during the activity of those deranged actions or natural functions of the system accompanied with much pain, such as parturition, &c., with clear and concise directions for their judicious administration, thereby securing their desired beneficial effects, in the reduction or complete annihilation of sensibility, and consequent mitigation or prevention of pain, and the means of obviating their injurious tendencies and consequences.

With regard to the inhalation of ether in parturition, the author expresses himself in the following strong and emphatic language: "*I believe there can be no previous condition of health which can be made to suffer by a judicious use of ether in child-birth, so much as by withholding it, unless, indeed, it be aneurism of the aorta; and even to this critical condition of the system do I carry my doubts.*"

We cordially recommend it to the notice of the profession, believing, while it is disseminating knowledge upon anæsthesia and anæsthetics, that it will also assist materially in the correction and removal of the prejudices against such agents, and, at the same time, promote the judicious and seasonable employment of them in all cases indicating or requiring their influence.

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We regret to announce the decease of Mr. R. W. McKISSICK, Dentist, of Cochranville, Pa. A more gentle, truthful, honorable man we never met with.

He was peculiarly respected and honored by all who knew him, and his loss will be deeply felt and mourned.



*The Food and the Teeth: Observations on the Inorganic Constituents of the Food of Children, as connected with the Decay of the Teeth, and the Physical Constitution of Woman in America.* By JAMES PAUL, M. D., Trenton, N. J.

The object of this interesting essay, which was originally published in the New Jersey Medical Reporter, is very well shown by its title. It is an excellent digest of the constitution of those materials employed as food in early life, and the relation they bear to the animal organism, and particularly their remote influence upon the teeth, with regard to their perfect or imperfect formation, and consequent proportionate tendency to decay, with the means of preventing such by timely and strict attention to the diet of children, thus causing a healthy developement of these organs in common with the rest of the system.

We are pleased to see the increasing attention bestowed, by the medical profession, upon these important parts of the human body, and hope that it will stimulate those, who are more immediately engaged in the treatment of these organs, to greater exertions in the study of those things so essential and indispensable to a correct appreciation and proper performance of the duties devolving upon them; and in the promotion of such a commendable intention we believe they will find this essay a valuable adjunct.

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*Discharge from the Ear and Deafness caused by the sympathetic irritation from a diseased Dens Sapientiæ, and cured by its removal.*

We commend to the attention of our readers the following extract from Mr. Wakley's Lecture, published in the London Lancet, April, 1851.

"I remember another instance occurring in a member of Parliament, who was annoyed at intervals for *two years*, by a discharge from, and *painful swelling* of, the right ear. At last the dens sapientiæ of that side became painful, and the gum inflamed; this *tooth* was removed, and the ear was soon well. This case I consider very instructive; and the close proximity and anatomical relations of the part, justify the supposition that the diseased condition of the tooth caused the deafness and discharge from the ear."

*Staphyloraphy*.—We had an opportunity, within the past week, of examining the mouth of a patient upon whom the operation of staphyloraphy had been performed a short time previous, by Professor H. J. Bigelow, of this city. The cleft was congenital, and presenting more than the usual difficulties in such cases. Four sutures were required, and so skillfully were they applied (the parts having been very nicely brought together) that union by the first intention was the result, not even leaving so much as a notch at the tip of the uvula. It affords us much pleasure to record cases, wherein the combination of surgical skill and mechanical ingenuity are attended with such good results. Although this operation in *theory* appears very easy, it is generally attended with the greatest perplexity, as those who have had occasion to perform it can bear witness.—*Boston Med. and Surg. Journal*.

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*Merrit's Dental Messenger*.—This is a paper of sixteen pages, published quarterly by C. MERRIT, Bridgeport, Connecticut. It contains much of interest, and will be of great service in imparting to the general reader correct information on the subject of the teeth.

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#### DISEASED ANTRUM.

W. B——, aged twelve, a native of Heworth, was admitted August 16, into the Newcastle-on-Tyne Infirmary, with great enlargement of the left cheek, from enormous dilatation of the antrum. The patient had measles three years ago, since which time the present tumour has gradually increased; its distension seems, from the feeling, to be caused by fluid.

Sir John Fife made an incision from the commissure of the mouth, horizontally backwards; another commencing at the same point, directly upwards. He then dissected back the flaps as far as the orbit, first tying the facial artery; then with Hey's saw he cut out a right-angled triangle of bone, exposing the whole of the *antrum*, which contained *two teeth* and about four ounces of gelatinous amber-colored fluid, but no organic disease. The swelling has now considerably decreased, and the patient is doing well.—*London Lancet*.



*On a Case of Predisposition to Cerebral Disturbance actively manifested after the extraction of stumps of teeth. Marked benefits from alcoholic stimulation.* By J. L. LEVISON, Esq., Brighton.

Mr. —, a gentleman of respectability, and of a mixed temperament, (the lymphatic preponderating,) came to have some stumps extracted from the upper jaw. They were removed with comparative ease; he bled for a few minutes; and, having expressed himself highly gratified that he had endured such little pain, when he had anticipated the contrary, left my residence with a countenance indicative of great satisfaction. On his return home, however, he commenced feeling his mouth, because he felt the edges of the alveolar processes, which, in his terror, he mistook for stumps that had not been removed. So he procured from a watchmaker a pair of pliers, and pulled and shook the supposed offenders, until he broke off a considerable portion of the socket: on examining which, he soon discovered that, instead of the fangs of the teeth, it was simply a rough piece of bone! His alarm was great, and very soon he called on me, highly excited, and in a state of extreme agitation. He said, "What is this, Mr. Levison?" "Why, sir, it is a portion of the socket." "What, a piece of the jaw bone?" "Yes, sir, a portion of the edges of that bone which form the outer and inner surfaces of the sockets, containing the fangs of the teeth." He then took the piece from me, saying, in a voice tremulous with terror, "What is this?" (pointing to the transverse portion which formed the septum.) I gave him a brief answer, explaining to him the structure of the alveolar processes, without making anything particular of the circumstance, so as to lead him to infer anything like danger from the accident. But he told me, that whatever might be the consequence, he had, in his ignorance, done the silly act himself; and he then detailed the operation he had performed with the pliers. There was so much wildness in his manner that I tried to soothe him: assured him in a jocular tone that the penalty he would pay for being his own dentist would be, that the gums would not heal so soon—that they would remain sore and tender, arising from the continued irritation induced by the rough edges of the alveolar processes, and so forth.

He seemed pacified, but left me with a dull, anxious look. I was soon called on to see him, and when entering his room, I perceived an extraordinary metamorphosis. His whole appearance had changed. He sat in an arm-chair, looking vacant and terror-stricken. When spoken to, he did not answer, unless a moaning sound every now and then could be regarded as a reply. I asked him if anything had happened since he last saw me? had he bled much? was he in pain? He startled me for a moment with his groans and suppressed sobs. But I repeated my questions, and these roused him; but instead of answering, he asked whether in mortification there was pain? I said sometimes, and which may continue until the affected part had lost all vitality. To my astonishment, what seemed to be likely to inspire him with confidence, aggravated his symptoms. He groaned in a most distressing manner, and his features assumed an almost idiotic expression, particularly when he exclaimed, "My mouth is mortifying! My mouth is mortifying! I shall die! I shall die!" These exclamations were followed with the most piteous groans.

His pulse was low and feeble; his mouth hot; his skin moist, pale and cold, like that of a person in partial syncope. I rang the bell for the servant, and gave him some hot brandy and water, which induced a better circulation, imparted warmth to his body, and rendered his expression more natural. Still he harped on the one string, that he was sure the gums were mortifying. Finding that reasoning with him was altogether useless, I tried the effect of ridicule, declaring "that large pieces of dead gums were dropping off—that there would soon be enough for his dog's dinner." This roused him; he could not bear the bantering. He became irritated, and would have abused me, but I gave him some more grog, and as he was usually a very temperate man, it had the effect I anticipated—he became inebriated, and very sleepy. I had him put to bed. He slept very soundly, and woke up refreshed, and in his usual condition, wondering how he could have been such a fool, to have frightened himself, giving me so much trouble, and his friends so much annoyance. Some time afterwards, when he had suffered some mental excitement, occasioned by a bereavement of one of his family, he became quite demented, and continued so for a very long period, hence proving



that hereditary predisposition could be developed under circumstances that would produce no alarming disturbance of the mental functions where there existed a healthy brain.

This case is also instructive, as showing that in many instances, when there exists an hypochondriacal tendency, that stimulation (particularly where there exists temperate habits) would often save us, as in this case, the development of active cerebral disease.  
—*London Lancet*.

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*Interrupted Form of the Dentine Tube.*—"Another point to which he called the attention of the society, as illustrated in a specimen before them, was the *interrupted* form of the dentine tube, a form not shown by Mr. Tomes among the varieties he figures. The appearance is like that of a thermometer tube in which the mercury has become broken up into larger or shorter columns, or like what is often seen in the centre of a hair. The line of the tube shows an alternation of dark and light spaces, often very regular in size, the dark portions sometimes little more than mere dots, sometimes of considerable length. It can scarcely be doubted that this appearance is owing to the presence of an opaque deposit, natural or accidental, in a transparent tube, which it has imperfectly filled, in the same way that an unsuccessful injection fills an artery, and it may be considered another evidence of the tubular character of the dentine, if such were wanting."—*Extract from Dr. Holmes' remarks upon Microscopic Anatomy, before the Boston Society for Medical Improvement*.

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*The late Mr. Nasmyth.*—The unrivalled microscopic preparations made by this gentleman, illustrative of the formation of teeth, have just been added to the Hunterian Museum, by purchase, on the part of the Council of the College. Accompanying the preparations are a great number of most accurate and beautifully executed drawings by Mr. Holmes.—*London Lancet*.

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We expected to have been able to commence in this number the publication of the valuable article by Dr. James Taylor, on filling teeth, but shall be obliged to defer it to the next.

*Evil effects following from the incautious administration of Chloroform.*—Dr. Bagot stated to the Surgical Society of Ireland, December 7, 1850, that a few months previously he had been sent for, at about half-past ten P. M., to see a young lady to whom chloroform had been administered, at twelve o'clock that day, for neuralgic pains of the face arising from carious teeth. She was a healthy, dark-complexioned woman, and had, he understood, great repugnance to the inhalation of chloroform, to which she submitted but as a last resource, after having exhausted every other available means of ridding herself of those very distressing pains. From inquiries, he judged that a drachm and a half to two drachms had been administered before anæsthesia had been produced. At the period of Dr. B.'s visit, ten hours and a half after the administration of the chloroform, the symptoms under which she labored were those of coma. She was lying on her left side, perfectly unconscious of all around her, her eyelids closed; on raising the lids, the eyeballs appeared much suffused, the pupils irregular, and scarcely acted upon by light. There was considerable congestion about her face, and her head felt hot; surface of the body and legs cold; pulse 90, thready, irregular and intermittent. Up to seven o'clock her friends had not found much difficulty in arousing her, although she soon relapsed into the same state. Since that hour it had been much more difficult to dispel the stupor, and it was after many endeavors that Dr. B. was able to do so. When roused, however, she intelligently answered a question, but after some hesitation, as if endeavoring to collect her thoughts. She then almost immediately sank into the same comatose state, having first expressed herself to the effect that she knew that she was dying. Two or three times during the day she had shown hysterical symptoms, crying when moved, and having the same thought of approaching dissolution before her mind. Her bowels (habitually confined) had not been moved for three days. The apothecary, by whom this very powerful agent had been administered, visited her more than once through the day, as also in the evening, but did not take any step towards recovering the patient from the very urgent symptoms under which she was evidently fast sinking.

The general features of Dr. B.'s treatment consisted in the admission of fresh air, strong carbonate of ammonia to her nose,



an occasional sprinkle of cold water over the face, stupes of hot water, containing an abundance of mustard, to the feet and legs. As soon as she was able to swallow, draughts of ether and aromatic spirits of ammonia, were given her, and in about two hours, when the urgent symptoms were relieved, and some reaction had set in, strong tea was administered, which seemed very grateful, and by which she was much benefited. Previous to leaving her for the night, Dr. B. prescribed a draught containing one drop of croton oil, which affected her bowels in seven hours.

It is worthy of remark that, as she recovered from the effects of the chloroform, the neuralgic pains returned to her face with great violence.

At Dr. B.'s visit next morning, she informed him that she had passed a wakeful night, and had suffered much from headache, which was confined to the right temple. This pain continuing through the day, two leeches were applied to her temple, from which she derived immediate relief, and was enabled for the first time to turn off her left side. She was much reduced in strength by this illness, and fainted at her first attempt to sit up in bed, where she was obliged to remain some days.—*Dublin Medical Press, December 25, 1850.*

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*Method of hardening objects in Plaster of Paris.*—Take two parts of stearine, two parts of Venitian soap, one part of pearlash, and twenty-four to thirty parts of a solution of caustic potash. The stearine and the soap are cut into slices, mixed with the cold lye and boiled for about half an hour, being constantly stirred. Whenever the mass rises, a little cold lye is added. The pearlash, previously moistened with a little rain-water, is then added, and the whole boiled for a few minutes. The mass is then stirred until cold, when it is mixed with so much cold lye that it becomes perfectly liquid and runs off the spoon without coagulating and contracting. Before using this composition, it should be kept for several days well covered. It may be preserved for years. Before applying it to the objects, they should be well dusted, the stains scraped away, and then coated by means of a thick brush with the wash, as long as the plaster of Paris absorbs it, and left to dry. The coating is then dusted with leather or a soft brush. If the surface has not become shining, the operation must be repeated.—*Chemical Gazette.*

*Fatty Tumor inside of Cheek.—Operation.*—This middle-aged woman perceived this tumor four years ago. Its position, just inside of the labial commissure under the mucous membrane, is a common one for little sacs containing the glairy fluid. This looked like one, and fluctuated; but proved to be common adipose tissue, as large as a chestnut. I removed it with a simple incision. The ether was continued to this patient some time after narcotism, and until she snored; her pulse being only reduced a little in frequency. This thorough dose lasted her through the operation. With a common dose she would soon have partially waked, shut her mouth, groaned and twisted about; and after vain efforts to get along, she would probably have stopped the operation to give her more ether. As it was, she slept tranquilly through it.—*Clin. Lec. at the Mass. Med. Col., Boston, by Henry J. Bigelow, M. D.*

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#### ESTABLISHING THE SCIENCE.

De Bonneville had been electrifying Detroit by his more than *galvanic* effects upon the muscles of scores of his *impressibles*, when an enormous sized Wolverine, “trying the thing” himself, found he was quite equal to the professor in setting folks to sleep and “makin’ on ’em cut up” afterward; and, accordingly, in the *furor* of his discovery, off he went to the country, to lecture and diffuse the new light which had been dispensed to him. His success was tremendous; town and village said there was something in it, until his reputation, as in other cases, begat him enemies. The Wolverine mesmerizer, after astonishing a “hall” full, one evening, at some very “promising town” or other, and which bade fair, shortly, to be quite “a place,” returned to the tavern, to be arrested in the bar-room by a score of “first citizens,” who had then and there congregated, “jest to test the humbug,” any how!

“Good evening, *Perfessor*,” said one.

“Won’t you take a little of the *fluid*?” said another; and this being an evident hit in the way of a joke, the “anti-humbugs” proceed to more serious business.

“*Perfessor*,” said the principal speaker, a giant of a fellow, before whose proportions even the huge magnetizer looked small, “*Perfessor*,” said he, biting off the end of a “plug,” and turning it over in his jaws very leisurely, “a few on us here, hev jest



concluded to hev you try an experiment, appointin' ourselves a reg'lar constituted committee to report!"

The professor begged to appoint a more proper place and hour, &c., or, according to the apprehensions of "the crowd," evinced the evident desire to make "a clean back out."

"Perfessor," resumed the *big dog*, "ef we onderstand right, you call your mesmerism a *remeejil* agent, which means, I s'pose, that it cures things?"

The disciple of science referred to several cases about town, in which he had been successful, to say nothing of the "pulling teeth" operation which he had just concluded his lecture with.

"Yes," said the challenger, "you're death on teeth, we know; but ken mesmerism come the *remeejil* over the rheumatiz?"

"Inflammatory or chronic?" demanded the professor.

"Wal, stranger, we ain't much given to doctor's bottle names, but we reckon it's about the wust kind."

The mesmerizer was about to define the difference between inflammatory attacks and local affections, when he was interrupted by the inquisitor, who *rather allowed* that as far as the location of the disorder went, it had a pre-emption right to the hull critter; and that, furthermore, it was jest expected of him that he should forthwith visit the case, and bid him take up his bed and walk, or he himself would be escorted out of town, astride of a rail, with the accompanying ceremonies. This was a dilemma, either horn of which promised a loss to his reputation, but the crowd were solemnly in earnest. Already triumphing in his *detection*, they began to look wolfish at him and wise at each other, so that the Wolverine had nothing left for it but to demand boldly "to see the patient." We will give the rest of the story as it was related by the disciple of Mesmer himself:

"Up stairs I went with 'em, mad as thunder, I tell you; first, at being thought a humbug, and next, that my individual share of the American eagle should be *compelled* into a measure, by thunder! I'd a gin 'em a fight if it hadn't been for the *science*, which would a suffered, any how; so I jest said to myself, let 'em bring on their rheumatiz! I felt as if I could a mesmerized a horse, and I determined, *whatever* the case might be, I'd make it squeal, by thunder!

"'Here he is,' said they; and we all bundled into a room, and gathered round a bed, with me shut in among them, and

the cussed big, unenlightened heathen that did the talking, drawing out an almighty bowie knife at the same time. 'That's your man,' said he. Wal, there lay a miserable looking critter, with his eyes sot and his mouth open, and his jaws got wider and wider as he saw the bowie knife, I tell ye.

"'That's the idee,' said the old Ingin.

"'Rise up in that bed,' said I; and I tell you what, I must a looked at him dreadful, for up he jumped, on eend, as if he'd jest got a streak of galvanic.

"'Git out on this floor,' said I, with a wuss look, and I wish I may be shot if out he didn't come, lookin' wild, I tell ye.

"'Now cut dirt damn you!' screamed I; and Jehu Ginral Jackson! if he didn't make a straight shirt-tail for the door, may I never make another pass. After him I went, and after me they cum, and *prehaps* there wasn't the orfullest stampede down three par of stars that ever occurred in Michigan. Down cut old rheumatiz, through the bar-room; out I cut after him; over went the stove in the rush after both on us. I chased him round two squares—in the snow at that—then headed him off, and chased him back to the hotel agin, where he landed in a fine sweat, begged for his life, and said *he'd give up the property!* Wal, I wish I may be shot if he wasn't a feller that they were offering a reward for in Buffalo! I made him dress himself—cured of the rheumatiz—run it right out of him; delivered him up, pocketed the reward, and *established the science*, by thunder!"—*Scalpel*.

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*Inflammation of the Gums.*—"Inflammatory Absorption."—The patient, a middle-aged man, in whom, without assignable cause, a toothache of the first left incisor, five weeks ago, was followed by pain in the upper jaw, which in a week presented a double ridge of swelled gum, almost burying the teeth and suppurating freely. The teeth, from the right canine to the left molars, were quite loose; abscesses had formed here and there along the gums, while the face was swelled and œdematous. The treatment consisted of cathartics, free local incisions, astringent washes, and the gum was occasionally touched with muriatic acid. The affection was greatly abated, though the teeth are still far from firm.—(*Extract from Clin. Lec. by H. J. Bigelow.*)—*Boston Med. & Sur. Journal*.



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows :

"This case is considered worthy of a special notice, for the following reasons:—The exceeding *vital* appearance which the teeth *maintain* when exposed to the *test* of *artificial light*, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The *manner* in which the *platina pins* are inserted, is also adjudged to be a *decided improvement*. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on next page cuts of our principal medals.

## GOLD MEDALS.



# THE DENTAL NEWS LETTER.

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JULY, 1851.

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For the Dental News Letter.

## CONSIDERATIONS OF THE HUMAN VOICE IN RELATION TO DENTAL SURGERY.

[Continued from January Number.]

BY J. D. WHITE, M. D., D. D. S., DENTIST.

*The different methods adopted for setting teeth.*—It is important that something should be said, in connection with my first article on the Human Voice, in relation to the various modes in use for supplying lost teeth. When only one or more teeth are retained in the front part of the mouth, and the roots are good, it is better to supply them by pivots than to extract the roots, because they can be made to resemble the lost organs in size and shape, and preserve all the natural relations of the former teeth and gums. If it be in a case where the natural organs were well formed, and did not interfere with perfect enunciation, but in some cases, it is important to remove the roots, in order that an artificial arrangement may be made to favor better the functions of the voice than the natural organs, as, for instance, in the lateral incisors falling behind the lower teeth when the mouth is closed, or either of the front teeth; and in one instance, which came under my observation, of the canine teeth falling inside of the lower teeth, preventing the tongue from reaching the front teeth with facility, on account of the space between them being too narrow. From this defect, all words in which occurred the articulations *se, te, ne, re, le, she*, were defective. In fact, when the teeth are irregular in either jaw, so that the tongue cannot be placed in contact properly with the whole row, the voice will be unsound; or where the teeth are very long, and open at their necks, from absorption of the gums by tartar, or where there has been too much filling in cases of plugging. On this latter point, some appear to have no object in view but to have free space to operate with ease to themselves, with clumsily made instruments, not deeming the defects in speech as of any consequence. Since writing my last



article, I have received a letter from an intelligent gentleman of Mobile, inquiring what he should do for his teeth, and to whom he should apply at his place for advice, as he had been so unfortunate as to have employed an unskilful dentist in Havana, who separated his teeth so much with the file as to have altered his voice very much. In his own language, "the teeth are too far apart, one from the other. I cannot now speak as before, half of the words passing between the teeth."

*Setting teeth upon plate and wire.*—The plate is the preferable method of setting or supplying any number of teeth, as it can be fitted to the inequalities of the gum and roof of the mouth, so that air cannot pass between it and the gum in speaking, which always affects the voice. The tongue can better adapt its margins to a plate than to a wire. I am constantly supplying plates where wire has been employed, and given more satisfaction. The bands to secure the plate are the same as to secure the wire operations. There are some cases in which wire may be deemed best, but it requires a good deal of experience to determine in what cases it may be.

*Atmospheric Pressure.*—The atmospheric-pressure principle is undoubtedly the best known method of supplying artificial teeth, especially for entire upper sets, and most generally for any number, down to a single tooth, for the health of remaining teeth. Partial sets ought always to be supplied in that way, if possible, and it can be accomplished in nearly all cases if the wearer will have a little patience. It very often happens that if a spring breaks, or a band, after a set has been worn for some time, that the wearer can succeed as well, and often, in full sets, better, without the springs than they had done with them, and frequently with very narrow plates. Where there is very little atmospheric pressure, they will be enabled to retain a set of teeth in the mouth, apparently, with the lips and tongue, with great readiness, and accomplish mastication exceedingly well. That this is true, every dentist must be fully aware; and it only goes to prove that there is not that great firmness or power required for retaining teeth in their place that the patient, or even the dentist, believes on first placing a set in the mouth. If the plates were made a little wider, and without springs in whole sets, or bands in partial sets, than is usual, much more good would be accomplished, and every

dentist ought to make it a part of his duty to impress this upon the minds of his patients, and where there is a reasonable amount of intelligence there will be no trouble. Every plate, after being worn for a short time, will be more or less influenced by atmospheric pressure, and it is only partial pressure that is required; for it is very evident that if a pressure of fifteen pounds to the square inch was constantly kept upon the gums, either by atmospheric pressure, bands or springs, it would obstruct the circulation and destroy the mucus membrane of the gums. Yet it would seem, from the remarks of some patients, that the efforts of dentists generally were to fasten the operation as firmly as bands can make them, or to obtain the full effect of atmospheric pressure. To better procure this latter effect, many curious modifications of the plain plate have been used, and some quite as ridiculous as useless, and about the respective merits of which much has been said. But I shall consider them only as far as they affect the voice. The plain plate, when it will answer, is undoubtedly the least objectionable; because, if well fitted, it does not interfere with the natural functions of the tongue in speaking; and, if the teeth are properly arranged on it, the voice will not be materially changed from its natural character.

“*Gilbert's Central Cavity Plate*” is perhaps preferable to any that have been devised with a cavity, chamber or chambers, that are worth using at all; because the plate can be fitted well upon the alveolar ridge, where all plates ought to fit, and have their principal bearing in mastication, and the chamber can be placed entirely out of reach of the action of the tongue while speaking, namely, on the hard palate, where no plate ought to impinge very hard, because the floor of the nose cannot support the pressure with impunity; and as the alveolar ridge is absorbing at all times, it will bring any plate hard down on the roof of the mouth; it will become a kind of pivot on which the plate will be constantly rolling. Some contend that the plain plate, well fitted, is better than any with a cavity or chamber. This cannot always be true; no matter how well a plate may be fitted to-day, the gum in a short time undergoes sufficient change as to only partially fit the plate; and if the plate fits well all over, it will become useless in a shorter time than when it is not driven down to the cast over the roof of the mouth. And what is strange,



so the dentists who condemn the central cavity, say themselves, that they do not swedge the plate close to the roof of the mouth. It is to be sure a plain plate, but has a *shallow chamber*, and no plate requires more; no matter how shallow the central cavity is, it is sufficient, because it favors the better impingement of the margins of the plate upon the gums, than without any, which is indispensable to obtain a due amount of pressure, and prevents, in a measure, the rolling of the plate on the gums during mastication; an effect which is inevitable on account of the elasticity of that substance; any plate will rock more or less when pressure is made on one side only at a time. It is an error, that the deeper the cavity the more firm will be the atmospheric pressure. If the chamber is as deep as the thickness of a piece of card paper, and the air is exhausted from it, the pressure will be as great as if the cavity were an inch in depth. It is the surface, not the height, that gains power. And if it were not that the column of air in this chamber is a better lever upon which to exert the power of suction, and a reservoir into which air can accumulate for a long time before all pressure is lost, and at the same time better prevents the plate from impinging on so much of the hard palate, the plain plate would be as good as it in all probability. Again, in bringing the jaws firmly together, the gum is forced into this chamber to some extent, and in so doing displaces the air and obtains an air-tight joint around its margin, similar to forcing a cork into a bottle, and secures complete atmospheric pressure equal to this surface; then, upon withdrawing the pressure of the jaws, the elasticity of the gums upon which the plate impinges, raises the plate away from the gum opposite the chamber, and increases the atmospheric pressure, and this action kept up constantly, and on all sides alike, the pressure is maintained without the act of suction on the part of the patient. Hence, I frequently instruct my patients to chew slowly, and on either side at the same time, until they are trained to their deliberate use. It is not my experience that the central cavity interferes with the tongue in speaking, because it (the tongue) impinges only upon the margins of the gum and the necks of the teeth, unless it be made a quarter of an inch deep, and placed far enough forward to be struck by the vibration of the tongue in the articulations, *se, te, ne, re, le*.

(To be continued.)

For the Dental News Letter.

## DENTISTRY, ITS RELATION TO AND POSITION IN MEDICINE.

Messrs. EDITORS :

We are sorry to see, by the subjoined resolutions, introduced into the American Medical Association, at its recent annual meeting, in the city of Charleston, S. C., that there is a desire to exclude the representatives from Dental Colleges, and of course inclusive, the cultivators of Dental Science, from membership and participation in the praiseworthy objects of this noble association, thereby intimating and proclaiming that dentistry is not a branch of medical science, and the practitioners of such not members of the medical profession. Now, it is almost, if not universally, acknowledged that dentistry is a branch of surgery, which latter is undeniably a very important part of medicine, and hence it must be considered as useful and essential a department of medical science as those which have for their object the preservation of the other organs of the body, such as the eye, ear, lungs, &c. These specialities do not, and cannot, with the exception of the latter, hold a more exalted rank or position than that of the teeth, the preservation of which organs are just as necessary, if not more so, to life and health than many of those, the investigation and purpose of which are acknowledged and included as legitimate branches of medicine. Hence we cannot see the object or benefit which will be derived from such false or artificial distinctions, but readily the great evils flowing from the calumny and disgrace thus attempted to be cast upon this particular department of medicine, because it will tend to degrade it to the level which it, in common with the other important branches, as of the eye, ear, &c., formerly occupied, and thus prevent men of intelligence, properly educated, from pursuing or cultivating it, which is being done to such an extraordinary extent at the present time, as is shown by its rapid and unprecedented advancement and improvement, which, we will venture to assert, is superior to and greater than that of its sister branches, and particularly those of oculistry and auristry, or more properly, optistry and otistry ; for these departments have not, as yet, been able to correct and supply, comparatively, to as great an extent, the deficiencies of nature, even so far as the physical adaptations of means to ends will warrant, and is capable of being done. There-



fore, the practitioners of, and dentistry itself, should rather be commended and exalted than contemned and degraded; for certainly, according to the usual mode of judging by comparison, the science and art of dentistry bears off the palm, in the rapidity of the improvement of the former, and the successful and beneficial results of its application to the latter, as thousands and tens of thousands can personally testify, from a daily practical experience; and consequently the practitioners engaged in the application of the principles of science to such an art, should assume and be placed in a more elevated position than those interested in the other departments, which are inferior to it in these and many other respects; though not wishing, in the least, to infer that these latter are not worthy of the high position which they now deservedly occupy, but rather from a desire to place the former also in its true position. Therefore, as a practitioner of the *art*, as dependent upon, and derived and deduced from, and in accordance with the *science* of dentistry, I protest against this tyrannical assumption of power, as an unjust and pernicious crusade against a highly important and necessary department of science, by those who have heretofore more especially represented the healing art, in thus stigmatizing and declaring that the art of dentistry is not a branch of that art, and the practitioners of such, many of whom are graduates of our best medical schools, are not entitled to, and are not worthy of, the favorable notice and association of, and equality with, their colleagues in the other branches and departments of the *ars medicina*, and are not engaged in the same noble cause of preventing, correcting and ameliorating the ills and afflictions incidental to this material organization and probationary and temporal existence.

No man, or set of men, have the right, though they may possess the power, to stigmatize or degrade any branch of the particular department of life in which they may be engaged, because, forsooth, they cannot appreciate its importance, and hence have entirely neglected its cultivation, and thus thrown or forced it into the hands of charlatans or ignorant men; and then when some of their own number or professional brethren, with the same professional education, and it may also be added, attainments and abilities, as themselves, desire and attempt to remove it from that degraded position, and thus rescue it from the hands of those who

cannot appreciate or practice it properly, and endeavor to elevate it to that height and position to which it is justly entitled, they will persist in doing injustice to it, and in contemning those of more enlarged views who are thus engaged. This attempt to traduce, for it can only be but a mere attempt, will undoubtedly fail, the disgrace of which will unquestionably return upon those concerned in such an unworthy effort, it being an unalterable law that right and truth will always, from their greatness, conquer and rise superior to those extraneous influences which may, for a time, retard their progress and elevation to their ultimate position or destination.

The condition or state of the science (for it now justly claims this title) and art of dentistry at the present time, will compare favorably with all or any of its sister sciences and arts, not only in the successful results of the application of the principles of the former to the practice of the latter, but also in the high character its literature and colleges have attained, being superior in this latter respect; for some of the other branches have not heretofore, in this country at least, been sufficiently valued to cause their distinct separation, and the organization of special institutions for their instruction and acquirement, whilst the former can point with pride to the number already existing, and others constantly rising and rapidly increasing, showing the high importance attached to the proper appreciation of the science and the practical application of its principles; and although hospitals, as in some of the others, have not as yet been instituted for its promotion, by treating the diseases and correcting the deformities incidental to the teeth or their deficiency, and the mouth and other parts, and also of the whole body, arising from them, yet there is no good reason why such cannot or should not be established, the necessity for them being as apparent as it is for the others; for it is well known that a large number, and even much greater than is suspected, of local and general derangements of the economy may be traced to, and are dependent upon, the primary disturbance, disease or deficiency of the parts comprising and forming this corporeal vestibule, in which the initiatory steps for the reduction and preparation of those materials which are essential to the support and construction of, by means of assimilation with, the animal organism, and upon which its development, existence and preservation is absolutely dependent.



As this resolution, however, is placed in the hands of a committee, and according to the usual course, therefore lies over to the next annual session, it is to be hoped that the time thus allotted for its consideration, will be used for further and more correct reflection upon, and in this way induce the members of that committee, and of the general association, and also of the profession, to take a more enlarged and liberal view of the subject, than the language of the resolution indicates has heretofore been done, and consequently cause them to discard it as highly injurious to the progress of the science of medicine generally, and as grossly unjust to this branch, and the practitioners of it especially.

Dr. Wood, of Pennsylvania, offered the following resolution :

*Resolved*, That Colleges, exclusively of Dentistry and Pharmacy, are not recognized by the Association, as among the bodies authorized to send delegates to its meetings.

Dr. Wood, of New York, moved to amend, by dividing the resolution, so as to take the question, first, on the reception of the delegates from Colleges of Dentistry ; secondly, on the reception of delegates from Colleges of Pharmacy.

The amendment having been accepted, the question of the reception of delegates from the Colleges of Dentistry was debated.

Dr. Lamb moved an indefinite postponement of the resolution, which was lost.

A motion was finally made by Dr. Hays, of Pennsylvania, that the whole resolution of Dr. Wood, including Colleges of Dentistry and Pharmacy, be referred to a special committee of five members, which resolution was adopted.

The following gentlemen were appointed a committee under a resolution in regard to Schools of Pharmacy and Dental Surgery, viz : Drs. Hays, Stevens, Yardly, Storer and Jones.

To neutralize or modify somewhat, however, the force of this intended infringement or indignity, it will be seen by the following resolution adopted and recommended by the Philadelphia Medical Society, and supported and approved in its adoption by the Pennsylvania State Medical Society, that all Medical Colleges are recommended to be henceforth excluded from direct representation in the National Association, which is desired to be confined to representatives or members of the state and county societies, thus making its action and rendering its influence more systematic and direct, and more especially the result of the united efforts of the profession generally, exclusively of the teachers in

colleges, and delegates from other medical institutions and associations, who may be, and are, however, represented either personally, or by their colleagues through the appointments of the subordinate county and state societies.

Dr. Samuel Jackson, late of Northumberland, offered the following resolution, which was adopted after an interesting discussion :

*Resolved*, That this society approves the recommendation of the Philadelphia County Medical Society in favor of a change in the mode of representation of the National Medical Association, making such representation to consist exclusively of delegates from State and County Medical Societies.\*

This, if successfully carried out, will be perfectly just, as all Medical Institutions and Associations will then be on an equality, and the members of the dental profession must then, as they should do so now, seek and secure their rights by claiming their eligibility to, and obtaining their membership in these local societies, and through them to, and in the National Association.

This will be no more than their just due, for they, in common, with the other members of the general profession of medicine, having received the same medical education, and being engaged in teaching the same great and general principles of science and practicing, by applying them for the welfare and happiness of their fellow men, necessarily have an equal right to all the privileges and benefits appertaining to such an honorable occupation.

In conclusion, I hope that these few general remarks upon this subject may induce a more enlightened view and policy with regard to the different branches, and this special one particularly ; and the relation they bear to the trunk of the great tree of medical science, and thus induce and cause those who are properly qualified to assume and receive, as they are justly entitled to, the distinctions and honors which are appropriated by and conferred upon their more fortunate brethren.

With the desire that these views may receive the favorable consideration and support of the profession, I remain respectfully  
yours,

MEDICUS.

Philadelphia, June 28, 1851.

\* We have since been informed that this resolution was also presented to the National Association, and referred to the same committee as the preceding ; the announcement of which was, however, inadvertently omitted in the published report of the proceedings.



For the Dental News Letter.

## PRACTICE IN THE SOUTH-WEST.

Messrs. JONES, WHITE &amp; McCURDY:

*Gentlemen*:—As promised on some former occasion, I will now endeavor to jot you down a few facts, figures and fancies, which are at your disposal, to instruct, amuse or interest your readers, as the case may be. I shall not attempt a labored essay, nor will I weary your patience, or bore your readers, with a learned disquisition on the possibility of a man's having more than three sets of teeth. On the contrary, I shall endeavor, in my imperfect and desultory style, to give you an "inkling" of life in the South-west. My more favored brethren, I hope, will not accuse me of "Foote-ing"\* it, if I tell them of difficulties to be contended with here that they "wot not of."

Our prices, 'tis true, are somewhat higher than in the older and more populous States; yet it is a well-known fact, that even wealth must have time for refinement. We have here a wealthy country—rich in every thing that can constitute a people truly great; but though we live *fast*, and are possessed of more go-aheadativeness than any people on earth, yet we, even we, must have time, time to prepare to live. It is not unfrequent to hear an individual exclaim, "My teeth are ruining! but really I have not *time* to have them operated on," and, in many instances, they really believe that they *have not time*; acting upon the principle that life is a race, and that every man is pitted against his fellow—that if he tarry by the way-side, his neighbor will get the start in the great scramble for the "almighty dollar." With this for his motto, he solaces himself with the reflection that there are other mills than *his* "*grub-mill*," and if his teeth do leave him, he can "mumble" it. So long as his locomotive power is good, with "Devil take the hindmost" for a starting point, he "pitches out," and cares not a cent for the future. There is a spirit of reckless adventure inherent in the people of Mississippi, that is evidenced by their every-day life, which I have never seen so prominently elsewhere.

Messrs. Editors, have you ever seen a Mississippi road in the winter season? If you have not, and were to get a glance at them when in "*mud*," it would puzzle you sorely to solve the problem of how we "*forded them*." I think if it be that the

\*Drawing a long bore.

“mickle black deil” beguileth the heart of man to lay “traps” wherein his own erring steps might fall, that he must have been chief engineer in the construction of our *railroads* and bridges, called, “par excellence,” “winter roads.” The bridge, particularly, is a curious specimen of—I cannot say civil engineering, for there is great strategy evinced in its construction. The unfortunate man who must dare their dangers, commits himself, with an invocation to Him who guideth the wayfarer in safety—to their uncertainties, and is, perhaps, landed in safety over, or—God forgive his sins—precipitated, with no regard for his “neck,”—horse, buggy and all, into the turbid waters or slimy sediment of some dirty creek. I speak knowingly, and *it* “full well I know,” *having* more than once personally proved that a man *might* fall through, or with a bridge, and *not* break his neck. But, as there is no evil, however great, without its attendant good, our summer roads are always passable, even decidedly good.

As is common in new countries, quackery and charlatanism have been the pioneers of science and intelligence; but I do think this State has been particularly cursed in that respect. It was my fortune, a short time since, to obtain one of the most ingenious specimens of self-confident ignorance to be found in the whole catalogue of dental curiosities. It was “tooth-carpentering,” with a vengeance. It was the four superior incisors, mounted upon a plate made of the shell of the tortoise, or common land *terrapin*. The teeth were made of the same material, the “*artiste*” selecting the lightest shade, with the *flesh side* out. The teeth were fastened on with brass rivets through them, perpendicularly. It was originally confined in the mouth by a strong, hard-twisted hempen cord, passing round—with something like a surgeon’s knot—the right and left superior bicuspides. It was done some years since by an itinerant “disciple,” who no doubt considered it his “chef de œuvre.”

I should like to hear, through the medium of the Letter, from some of your correspondents, on the subject of chloroform, their manner of administering it, its effects, &c., together with their experience on the subject generally. I have been using it to some extent, and with great advantage.

Yours, &c.,

Q. C. GRASTY.

Houston, Miss., April 14th, 1851.



For the Dental News Letter.

### ARTIFICIAL MARBLE.

We commend the following to the profession, as it will afford a means of preparing and preserving, more effectually, cases of malformed, deformed, and other irregular and curious cases, (while at the same time it is applicable to a great variety of other useful and ornamental purposes,) and thus excite a greater desire for, and promote more successfully the formation and preservation of a cabinet of such specimens, which every professional man should endeavor to secure, thereby, in time, collecting and adding records of a great number of cases, and a large amount of matter which may, probably, subsequently become essentially valuable for the improvement and advancement of science:

*Specification of the Patent granted to Selim Richard St. Clair Massiah, of Alderman's Walk, New Broad street, in the city of London, for Improvements in the Manufacture of Artificial Marble and Stone, and in treating Marble and Stone.*  
Sealed August 10, 1850.

To all whom these presents shall come, &c., &c.:

Firstly. Cut or shape the gypsum or sulphate of lime, or alabaster, to the required form, and place it in the drying room, at the temperature of from eighty to one hundred degrees of Fahrenheit.

Secondly. When thoroughly dried, immerse it in a warm solution of borax and sal-enixum, (super sulphate of potash,) in the proportions of about one pound borax and a quarter of an ounce sal-enixum to the gallon of water; take it out, and again place it in the drying-room.

Thirdly. When dry expose it to a heat of from 250 degrees of Fahrenheit or upwards, until the watery parts are entirely driven off; take it out of the oven or stove, and to prevent decrepitation, let it cool till the hand can be borne on it for a few seconds; then immerse it for the second time in a hot saturated solution of borax, to which add from a quarter to 1 oz. of concentrated nitric acid to each gallon. Attention must be paid to the quality of the nitric acid, by obtaining the best and most concentrated, as much of the hardness and bleaching quality depends on it. Leave it to simmer, or nearly so, until the stone is thoroughly

saturated. Take it out, and leave it to dry, when it will be found to have acquired a marble-like hardness.

Fourthly. A day or two after, heat it gently, and apply to it Canada balsam, diluted in turpentine or naphtha; it may be kept warm till the spirit is driven off; or it may be taken away and suffered to be driven off by the air.

Simple colored marbles are obtained by proceeding as already mentioned; but substituting for the solution of borax and nitric acid, a solution of borax accompanied by a dye and nitric or other acid, or a nitrate, ex. gr.,—for blue, a solution of borax with prepared indigo and nitrate of iron.

Compound colored marbles are obtained by a double process; ex. gr., the first process as for blue given above, when it must be suffered to dry. Then expose the stone now dyed blue to the second process of heat; suffer it to cool, as already said, to prevent decrepitation; and immerse it in a solution of borax, to which add safflower or any red dye, with nitric acid, when the blue and red separate into ranks, forming apparently natural streaks or veins, partaking of purple tints in some places, and in others preserving the red and blue veins apart and unblended. This process may be repeated with other dyes, so as to obtain three or more colors.

I do not confine myself to the use of borax and sal-enixum, as alum or other earths may be used. But I claim the employment of nitric acid in the white and naturally veined marbles, and the mode of obtaining the compound colors, which may be tripled and quadrupled by multiplying the process. Old, inferior, or decrepitating marbles, I submit to the same process, and effectually strengthen or dye them.

I also claim the process when applied to these purposes, &c.

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For the Dental News Letter.

#### REPLACEMENT OF A NATURAL TOOTH.

MESSRS. JONES, WHITE & McCURDY:

*Gentlemen:*—The latter part of April I performed rather a novel operation, and thinking that others might have cases similar coming under their notice, where they could perform the same operation with success, and very much to the gratification of the patient, I thought I would report it for your very useful Dental News Letter.



My oldest daughter, about sixteen years of age, being at home during the vacation in her school, one day drew my attention to the first bicuspid in the left side of the superior maxilla. She complained of great pain in the tooth, and especially, when she attempted to bite with it. Upon examination, I found the gums somewhat swollen, and a cavity in the posterior side; but the pulp not being exposed, I was very loth to have so prominent a tooth extracted, and hoping to reduce the inflammation and fill the tooth, I ordered applications for that purpose, but did not succeed; and after she had suffered a day or two of intense pain, I consented to extract it. Having seated her in the chair, I took it out with perfect success; the blood flowed very profusely; and while she was attending to that, I examined the tooth, and found a large, but very well shaped cavity. Having in a number of cases extracted teeth to destroy the nerve, and replaced them with success, the idea struck me that I could fill this and replace it. I immediately cleaned it out and filled it, and was about to return it, when I discovered a small cavity in the anterior part of the second bicuspid; I laid it down and cleaned and filled that also; after which I returned it to its place, gradually pressing it up. She suffered very much from the soreness for several days; but it at last became perfectly tight; and when she left home to return to the school, it was apparently as firm as ever, and I have no doubt will retain it many years if she should live.

Hoping that many may hereafter be saved from the loss of prominent teeth by myself and others in the same way,

I remain yours, &c., B. J. LIPMAN.

Brooklyn, May 27, 1851.

REMARKS ON THE ABOVE.

The treatment in this case appears to have been very successful, and more astonishingly so, on account of the length of time the tooth was separated from its natural condition and position, and consequently well exemplifies the wonderful recuperative powers of the animal economy.\* The practice, however, is not new, but one which has been in vogue for a long time, having been adopted as a substitute, and to avoid the necessity for the final extraction; and also as a modification of, and to prevent

\* A similar, but rather more important case was published in the second number of the present volume.

the resort to the old plan of transplantation of the teeth, recommended and practiced by the older writers and practitioners; but which has been generally discarded by the more recent ones; having fallen into disrepute from the evil effects often directly arising from its practice, and also, in consequence of the superior advantages otherwise derivable from the present improved modes of treatment; yet, as there may be, and are *occasional* cases in which it might be admissible as a *dernier* resort, the attention of our readers is invited to it, and any facts tending to elucidate the subject, will no doubt be interesting to the profession generally; therefore, those who may be in possession of such, will not only promote the welfare of the afflicted, but also the interests of science, by furnishing them for publication, thereby affording means for estimating more definitely its merits; thus placing the practice on a true basis, and showing to what extent, in what conditions, and under what circumstances it may be made useful.

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#### ON THE USE OF THE BLOW-PIPE.

The soldering lamp may be fed with oil, tallow, or hog's lard. The flame of a spirit-lamp gives a strong heat free from smoke; the only objection to it, being the increased expense attending the employment of alcohol as a combustibile. The wick of the lamp should be parted in the middle, in order to expose as great a surface as possible to the flame.

The great art in the use of the blow-pipe consists in maintaining a continuous, equable stream of air so long as the operation of soldering requires it. To effect this, the blast must not proceed directly from the lungs, but the cheeks must be inflated, and by their compression the air must be forced through the blow-pipe, respiration being maintained in the meantime by breathing through the nostrils. This, though rather difficult at first, will become easy after a little practice.

The beginner should first learn to breathe through the nostrils, keeping the mouth shut. Let him then learn to distend the cheeks with the air thus inspired, and to make several respirations, without suffering any air to escape from his mouth. When able to accomplish this, let him take a blow-pipe between his lips, and having filled his mouth with air, let him expel it gently



through the tube by the action of the muscles of the cheeks, while he breathes through the nostrils. To this end the tongue must be applied to the palate, so as to interrupt the communication between the mouth and the passage from the nostrils. As the supply of air in the mouth diminishes, it is to be renewed by withdrawing the tongue from the palate, and again replacing it, as in pronouncing the word *tut*.

It will be advisable to practice the keeping up of a stream of air in this manner with the blow-pipe alone, without applying it to a flame; and having become tolerably expert, the learner may then proceed to keep up without attempting to direct it on any object; and when he can do this with facility, he may proceed to fuse small lumps of lead or zinc, placed on charcoal previously scooped out so as to form a small cup suitable to contain the metal in fusion.

A ragged, irregular flame shows that the orifice of the blow-pipe is not round and smooth, and a cavity in the flame shows that the orifice is too large.

Having thus become able to manage his blast so as to have a perfect control over it, the student may proceed to solder his artificial denture.

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*Anomalous Disease of the Superior Maxilla.*—Mr. Avery discharged a few days ago from the clinical ward, a woman sixty-four years of age, who had applied for a diseased condition of the superior maxilla on the right side. The symptoms were only of nine months' standing, and consisted of severe pain in the jaw, an enlargement of the bone towards the face and into the mouth, with a very offensive purulent discharge from the nostril. The right half of the hard palate was projecting downwards, and yielded to the finger a fluctuating sensation. Mr. Avery introduced a fine trochar into the swelling, in order to ascertain whether it contained fluid, when the canula yielded some blood. Under these circumstances, Mr. Avery thought that it would not be prudent to propose any further surgical interference, and sent the patient to her friends. We are anxious to mention this case, as we consider that it is requisite, in the history of modern surgery, that not only operations should be recorded, but likewise those instances where the removal of an important bone might be attempted, and the surgeon has abstained.—*London Lancet, May.*

For the Dental News Letter.

## TREATMENT OF TUMOURS AND ABSCESSSES.

BY GEO. J. ZIEGLER, M. D.

MESSRS. EDITORS:—A short time before the reception of the last number of your Journal, in examining the mouth of a gentleman, I observed a small tumour in the inside of the cheek, below, and a little posterior to the left angle of the mouth, somewhat similar to, although not so large as the one described in your extract from the Boston Journal. I directed the attention of the gentleman to it, and obtained his permission to treat it, which I did by merely puncturing it with a lancet, and extending the incision through it from one side to the other, thus exposing its interior, then cauterizing the whole of the internal surface of the lining membrane with nitrate of silver; and in consequence it collapsed, and healed very readily in a few days by the first intention. This is a very simple and generally a very efficacious mode, without resorting to the complete excision, and superseding the necessity for general anæsthesia for the purpose of treating these tumours, which are usually, as was this one, filled with a glairy fluid, somewhat resembling the vitreous humour of the eye, and of such a consistence as to remain stationary, except the protrusion, after even complete separation of its external supporting and lining tissues, it seeming to be deposited and retained in cells, and surrounded by a membrane analogous to the hyaloid membrane. The treatment is in accordance with established and known principles in surgery, being similar to that required in various other analogous conditions, such as hydrocele, &c., in which, however, it is necessary to introduce the remedial agents by injection, to excite increased action or inflammation, for the more perfect agglutination of the tissues, and the radical cure of the disease, though most generally the injection in this latter case consists principally of other substances, such as tinct. of iodine, port wine, &c.

This principle might be made of more general application in the treatment of analogous tumours, in other parts of the body, with or without the evacuation of their contents, according to circumstances; and also deeply seated abscesses, indisposed to



heal, which are frequently connected with the surface by a fistulous opening, and if not, the contents could be first, generally, readily evacuated by incision, followed by the injection of solution of nitrate of silver, tinct. of iodine, &c., which would no doubt promote the tendency to healthy granulation, by exciting inflammation or exalted action, and consequent adhesion. But what I desire more particularly to draw attention to, in the application of this principle to dentistry, is the treatment of alveolar abscess, especially important where it is connected with a tooth or teeth, the preservation of which is so often of the greatest moment. It is well known that the treatment of this affection heretofore has been very unsuccessful, so much so, indeed, that almost all writers consider it entirely nugatory, and that the only alternative is the sacrifice of the tooth so implicated. I have been in the habit of using the tent in these cases, but, I must confess, with very little benefit; yet this may have been from the stage of the disease, or from not persisting in its use steadily for a sufficient length of time; and also on account of the difficulty of inducing patients to keep it in, or have it renewed when accidentally withdrawn.

The present course, however, promises something better, and, therefore, it is presented for consideration, and thus we may, in a much shorter time, through the experiments of a large number of persons, obtain a mass of testimony, sufficient to prove its utility or worthlessness. For the satisfaction of those who may be disposed to consider it of doubtful efficacy, I will state, that this principle has been recently successfully applied by M. Boinet to the treatment of extensive abscesses around the joints and bodies of the bones in which they were also involved, and with speedily beneficial and curative effects. In alveolar abscess this treatment should be instituted, as in the cases reported by him, as early as possible, and more particularly in the congestive and suppurative stage, and better before the bone is denuded, as the earlier it is resorted to the greater the prospect of success, by opening the sac as soon as it is formed, or even puncturing before it is complete, and injecting a solution of nitrate of silver, sulphate of copper, tinct. of iodine (the one employed and preferred by M. Boinet), or any other appropriate remedy, then the insertion of a tent, to cause it to fill up from the base of the

cavity with granulations, otherwise it will generally close at the fistulous orifice, and thus retard, or even prevent, the cure.

The incision should be sufficiently deep and extensive to expose the periodontium, sac, base of the fang, and the surrounding diseased bone, directly to the influence of the remedial agent, so as to excite more immediately healthy action in the parts implicated. Of course in numerous instances, and particularly in the earlier stages, in the inferior maxillary principally, an almost insuperable obstacle to the proper institution of this treatment would be the thickness of the intervening bone; but in a large number of cases it will be found that this has been previously removed by absorption or disease, and in those in which it has not, it may to a certain extent, where circumstances warrant such a course, be obviated by the removal or puncturing of the external and investing layer, which could, on account of its thinness, be generally readily effected in the superior maxillary especially, in which, from its greater vascularity, this disease most frequently appears.

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#### TREATMENT OF CERTAIN CASES OF HARE-LIP.

[E. A. Lloyd, Esq., in a clinical lecture on surgery, lately delivered at St. Bartholomew's Hospital, related the two following cases of complicated hare-lip, which were highly interesting from the successful application of a new mode of overcoming the difficulties met with in some complicated cases.]

CASE I.—*Hare-lip, with a large portion of the superior maxillary bone projecting through the fissure, cured by operation.*—The child, Eliza Fisher, was admitted in Sept. 1849, during the time I was absent from town, and when Mr. Paget was attending to my patients in the hospital. On my return she was handed over to me in a most emaciated state, perfectly pallid, and with patches of eczema impetiginodes on different parts of the face and body, with diarrhœa, very little appetite, and altogether in such a miserable state that no one would have been justified in performing any surgical operation at that time.

A large portion of the superior maxillary bone was projecting through the cleft of the lip; not perpendicularly in the natural position of the bone, but turned upwards and forwards, and projecting horizontally, in a direction nearly at right angles with the



normal position of the teeth. The fissure extended through both hard and soft palate. The state of the child's health was at that time so bad that it was little expected there would ever be an opportunity of performing an operation. But, in a short time, by the employment of appropriate medicines, the diarrhœa was checked, the condition of the stomach improved, the appetite increased, and the cutaneous disease subsided. The cod-liver oil was freely administered, and, in a few weeks, the health of the child was so far improved, and it gained so much flesh and strength, that it was considered means might be commenced to obviate the deformity without any risk. Before uniting the fissure in the lip, it was necessary to get rid of or change the position of the projecting piece of the superior maxillary bone. The practice in this hospital has hitherto been to cut off the projecting part; but this plan leaves a gap in front of the bone which is never filled up, and which remains a deformity for the whole of a patient's life, and interferes materially with the power of articulation.

In order to obviate this inconvenience, it was attempted to push the portion of bone back into its proper place, by keeping continual pressure on it by means of a pad. This plan was tried for several weeks, but it failed entirely. I then determined to forcibly break down the piece of bone with a strong pair of forceps, to bend it into the gap, and leave it to become fixed there. This was easily accomplished, the soft parts having been previously divided. A small compress of lint was placed over the part so as to confine the bone in its new position, and kept in its situation by means of adhesive plaster.

No bad symptom whatever followed this operation, and the piece of bone was easily retained in its new place, and in about a fortnight it became firmly fixed there. By this means the gap in the superior maxillary bone was entirely filled up. The ordinary operation for hare-lip was now performed; viz., the edges of the fissure in the lip were pared, and the two even surfaces were brought together in the usual way with hare-lip pins.

There was some considerable difficulty, however, in doing this, for the nose was twisted; also one side of the fissure in the lip was much longer than the other: so that in order to adjust the edges properly, it was necessary to pare the edge of the shorter

side of the fissure in such a manner as to make the raw surface of a convex form; thus leaving a surface on the shorter side of sufficient length to unite to the whole of the longer edge of the fissure.

The uppermost hare-lip pin was discharged by ulceration on the third day, which resulted from the great force required to bring the parts into contact at the time of the operation; and in consequence of this a small aperture was left.

The other pin was allowed to remain two or three days longer; and when it was removed, the two raw surfaces were found to have firmly united below, but the aperture left by the ulcerating out of the upper pin still remained. The edges of this aperture having healed, it became necessary to detach the cuticle from them, and then bring them into contact as in the first operation.

I have always found that strong liquor potassæ is the best caustic to apply in these cases, for the purpose of detaching the cuticle; and in this case it was applied. The two raw surfaces were kept in contact by means of a long strap of adhesive plaster passed all around the head and above the ears, the two ends being crossed over the wound in front.

It is necessary to pass the plaster all round the head, otherwise it will frequently slip, and thus fail in keeping the two sides of the cleft in continual contact with each other.

I have never known this plan of treatment fail in any case. In a few days the aperture was perfectly closed, and the child left the hospital, not only cured of its unsightly deformity, but likewise in the enjoyment of a good state of health.

Ol. jecoris aselli was continued with marked benefit during the whole of the time.

The next case I will relate to you was certainly the most unsightly instance of this deformity I ever met with, and one in which the plan of breaking down the projecting piece of bone, instead of cutting it off, was perfectly successful; and a most satisfactory cure was the result.

*CASE II.—Double Hare-lip, with the central portion of the superior maxillary bone so elevated as to make a right angle with the rest of the jaw, cured by operation without cutting off the bone.*—In this case, which came under my care at the hospital a few months ago, a portion of the superior maxillary bone,



about half an inch in breadth, with a portion of the lip attached to it, was projecting upwards and forwards, at right angles from the natural position of the bone, carrying with it the septum nasi, and thus elevating the nose in an extraordinary way, the alæ nasi being at the same time widely spread out.

This elevation of so large a portion of the front of the face caused a deformity so hideous that the "human face divine" was scarcely recognizable. So dreadful, indeed, was this deformity, that to remedy it by any operation was almost despaired of.

But I determined to make the attempt, even in this case, feeling assured that all cases of hare-lip, however bad they may be, can always be considerably relieved by operation.

I therefore strongly advise you to operate in all cases that may be placed under your care.

This child was also in a most emaciated state; it was brought up entirely by hand; the nature of the deformity rendering it impossible for the child to take any of its food in the natural way.

As the means most likely to afford support and strength to the infant, cod-liver oil was given at first, in doses of one drachm, three times a day: but it was, after a week, increased to two drachms. This having been continued for three weeks the child's health was so much improved, that I determined to break down the projecting piece of bone.

I should tell you that, during the whole of this time, Mr. Ayre, one of my dressers, on whose diligence and attention I can most implicitly rely, had attempted, by slight pressure continually applied, to press down the projecting piece of bone; but this was of no more use than in the case I have just related to you. I first dissected up the central portion of lip from the projecting piece of the bone, and then with a strong pair of forceps broke the bone, and forced it down into the gap. After this was accomplished, a pledget of lint was placed on the broken piece and confined there by means of sticking-plaster carried round the head and face, so as to prevent the bone from again projecting, having previously raised up the piece of lip which I had detached.

The bone having, in a few weeks' time, become firm in this position, I operated on one side of the lip in the usual way, and

brought the edges together by one common suture and one hare-lip pin. There was not room for two pins.

This operation was quite successful, and in about three weeks I determined to operate on the other side. Here a difficulty presented itself, the edge of the fissure on one side being much longer than that of the other, the shorter side being that of the central portion of the lip. The pareing, therefore, of this edge was carried to a certain distance round the lower extremity. By this means the two raw edges were made of the same length, and brought accurately into apposition.

The edges of the cleft readily united, and the patient is now quite recovered, and instead of being a hideous object, is now a really good-looking child. The nose, too, which was flattened at first, is at present much more prominent.

The child will be brought to the consulting room to-morrow, when you may have an opportunity of judging for yourselves of the success of the operation.

I never saw so much projection of the bone as in this case.

In cases of very young children, I recommend you always to try pressure for some time when the bone is projecting. It may not unfrequently be reduced by that means, and, in proof of this, I could, if it were necessary, adduce many cases.

On no account cut off the projecting piece, for, although the highest authorities have recommended that practice, I feel convinced that it is quite unnecessary, and that by so doing you will render the articulation of the patient imperfect for his whole lifetime; and, in many instances, much deformity will result, from the falling in of the lip, there being no support for it.

Although, indeed, by the removal of the part, you accomplish your object in one operation, that slight advantage should not be considered when the patient's comfort for life is at stake.

We frequently see persons who have been operated on for hare-lip, with a small V-shaped cleft remaining at the bottom, when the pared edges have not united. This, I imagine, arises from the parts retracting below the lower needle, and not being kept in contact long enough to enable them to unite. I therefore advise you, in order to obviate this, in all simple cases of hare-lip to make both the raw surfaces of a concave shape; and by this means you will leave a sufficient quantity below the



lower needle to allow for a certain degree of retraction, without a gap in the margin being left. This mode of proceeding I have followed in the hospital for many years.

There is another plan which I have also sometimes adopted to prevent a notch remaining in the lower margin of the lip. I leave portions of what I slice from the edges of the fissure attached to the inferior angles of the fissure; turn them down with these raw surfaces opposed to each other, and confine them in that situation. By this proceeding, instead of a notch being left, the central portion of the margin of the lip may be made to project. It is many years since I first had recourse to this proceeding.

Sometimes the edges of the fissure are so far apart that it requires great force to bring them together, and in these cases they will not readily unite. It is therefore necessary to separate the parts very freely, and far back on either side; and I have met with cases in which the deficiency of lip has been so great that there was no possibility of keeping the edges of the fissure sufficiently in contact without making a perpendicular incision on each side of the lip, commencing at the outer side of each of the alæ nasi. By this means you will always be enabled to bring the edges so easily together that they will readily unite. The incision should not be carried through the membrane of the mouth, but merely through the common integument and muscles. It will sometimes suffice to make an incision on one side only. This cut generally heals readily, and little or no mark remains.

When the surfaces have not united, although the pins have been taken out or have discharged by ulceration, the edges may be readily kept in contact by a long narrow piece of plaster, bound round the head in the way I have described.

Bandages of various kinds have been recommended for this purpose, and were formerly much used in this hospital; but I think the plaster a far more certain application, as it is less likely to slip, and is much more easily applied.

The coronary artery will sometimes bleed very freely, but it should never be tied, for the presence of a ligature would necessarily impede the healing process, and thus render the cure more tardy. But it is of course of great importance to lose as little blood as possible in all operations on children. I therefore

always pass the pins through the two sides of the lip as quickly as possible, and then draw the parts together by the twisted suture, without wasting any time in trying to stop the bleeding, for that will always cease when the parts are thus brought together.

With regard to the age at which this operation is best performed, there has been great difference of opinion; but, so far as my experience goes (and I have operated as early as three weeks and as late as the twenty-first year), I do not think, in simple cases, it makes much difference. In the more complicated cases, the operation should always be performed at the earliest period.

I should, however, avoid, as far as possible, the period between six months and two years, because dentition is then going on. As a general rule, I think that the earlier you operate the better; for the most successful case I ever had was in a child, as stated above, only three weeks old.—*Medical Times*, February 1, 1850.

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*Removal of the Lower Jaw on the right side, for Cystic Disease; Recovery.*—(Under the care of Mr Fergusson.)—We have had frequent opportunities of reporting cases of malignant diseases of bone, where the surgeon has the melancholy conviction, at the time of removing the affected parts, that the unfortunate tendency to reproduction will, sooner or later, destroy the patient; but the successful operation which we have this day to put upon record, was necessitated by an affection of bone, which holds out a fairer prospect. The osseous structure was here the seat of cystic disease, and as the whole of the jaw on the right side was removed, it is extremely probable that the evil is thoroughly eradicated. The case, from notes taken by Mr. Edwards, one of Mr. Fergusson's dressers, runs as follows:

L. S——, aged forty-eight, single, a professor of music, of fair complexion and nervous temperament, was admitted March 20, 1851, under the care of Mr. Fergusson, with a very prominent tumour occupying the greater portion of the inferior maxilla. The patient gave the following history:—Thirteen years ago his head was attacked with erysipelas, when the right cheek was observed to swell considerably, and continued to increase for some time. These symptoms, however, subsided; but three years



afterwards the patient began to suffer from toothache and pain, extending up the right side of the face. As the two molar teeth had become carious, they were extracted, and the pain subsided.

Two years subsequently a tumour formed over the alveoli whence the above-mentioned teeth had been removed; the patient made an incision into this swelling with a penknife; some glairy fluid escaped, and the parts seemed after a little while to be cicatrized. But the tumour did not completely subside; and the patient fell into the habit of puncturing and evacuating the contents of said swelling whenever it became distended with fluid. This continued for about six months, when the gum healed up, and no more uneasiness was felt. One year and a half after this subsidence, various cerebral symptoms set in, among which was the occasional inability of seeing more than a portion of a word at a time. While in this state the patient was suddenly seized, during his breakfast, with paralysis of the right side of the face; he lost the faculty of speech, and his mouth was drawn to the left side. This attack was, however, of very short duration, for all the symptoms disappeared in the course of three days, no remedies but a little purgative medicine having been taken.

At this period the body of the lower jaw on the right side, about midway between the joint and the symphysis, begun to expand outwardly; this swelling increased very slowly, and occasioned no pain; the protruded part felt hard and smooth, but on pressure a slight crackling could be heard. Within the last twelve months the growth has been more rapid; and the patient having consulted Mr. Fergusson about five months ago, the latter made an opening into the tumour within the mouth, where it was slightly protruding, and this measure gave exit to some glairy fluid. The part continued to discharge the same kind of liquid for some time, when the patient applied to another surgeon, who inserted *potassa fusa*, and kept open the part with lint tents.

This proceeding occasioned severe pain, and entirely changed the character of the discharge, which became fœtid, mixed with sloughs, and increased in quantity. Besides the two molar teeth already mentioned, the patient lost another molar and a bicuspid on the same side; the first fell out spontaneously, and a second was extracted. It is worthy of note that neither of these had any fangs left.

On examination, the tumour was found to be the size of a large orange, forming a solid mass, seemingly attached or forming part of the lower jaw on the right side, and extending from the angle of the maxilla to the symphysis. At the latter spot the bone appears to be gradually expanding into the tumour, which latter is hard, smooth, and painless to the touch. The skin over it is not in the slightest degree altered, and the swelling does not project much within the mouth; an opening exists, however, in the gum, through which the probe passes very easily into the cavity of the tumour. This bony cyst is filled with fœtid matter, which escapes when the patient inclines his head forward. The gum is rather spongy, but the general health good.

Mr. Fergusson ordered a silver double-grooved plate to be adapted to the interior of the mouth, with the view of receiving the upper and lower molar teeth on the sound side, by which means those of the affected side were kept about an inch apart. It was evident that no remedial means could be of avail, except the complete removal of the diseased portion of the jaw; and as the tumour had plainly involved the greater part of the latter, Mr. Fergusson resolved to remove the right half of the lower maxilla from the articular process to the symphysis.

On the 22d of March, the patient was brought into the theatre, and rendered insensible by chloroform. Mr. Fergusson began by extracting a lower incisor tooth and the canine on the right side; he then passed the point of a bistoury into the mouth, about half an inch below its angle, without dividing the red part of the lip. The knife was then made to run along the lower margin of the jaw to about the middle of the tumour, and the soft parts having been detached from the bone, Mr. Fergusson introduced the common straight saw, with which the bone was very clearly divided at the symphysis. The next step consisted in carrying the external incision over the tumour, nearly up to the articulation, and dissecting up the flap towards the eye and nose. Mr. Fergusson then rapidly separated the muscles attached to the inner surface of the jaw, and the latter having been disarticulated, the whole mass was removed.

The hæmorrhage was not by far so abundant as might be expected from the usual vascularity of the part; the facial artery was then tied both above and below, as well as the facial vein, from



which the blood issued profusely, the superior dental artery, and several other smaller branches. The margins along the line of incision were accurately brought together by stitches, and one of these, towards the centre, was left unfastened, to afford an escape for whatever oozing might take place, directions being given to have it tied in the evening. The patient, who had been kept under the influence of chloroform during the whole operation, was removed in very good condition.

Mr. Fergusson took occasion to remark to the pupils assembled, that the present was a good example of a benign tumour of the jaw; it had, however, created much deformity, and if not interfered with, would have ultimately worn out the patient. This tumour was one which the surgeon could, in the most legitimate manner, take away. He (Mr. Fergusson) had considered it advisable to remove the whole of one side of the jaw—first, because the disease had involved the greater portion of the bone; and secondly, as the small portion towards the condyle, which might be considered as sound, would have been of very little use to the patient; much time having besides been gained by not sawing the ramus, but disarticulating at once. The steps of the operation had been the same as are usually followed. Mr. Fergusson would, however, direct the attention of the pupils to the fact of his not dividing the red portion of the lip—a proceeding which, he thought, would be greatly conducive to a satisfactory appearance afterwards. He had likewise refrained from carrying the incision at once up to the ear, as he was anxious not to divide the facial artery until the most tedious and troublesome part of the operation, viz., sawing the bone, was accomplished.

Mr. Fergusson had found the straight common saw the most convenient instrument for dividing the symphysis—far preferable, indeed, to the circular, or the chain saw. The disarticulation had been greatly favored by the tumour being hard, and therefore affording a convenient lever. He had tied both the upper and the lower end of the facial artery, to obviate any chance of secondary hæmorrhage, as had once occurred in private practice in a similar case. Mr. Fergusson further stated, that the question of using chloroform during operations on the mouth was practically answered by the present case, where one of the most important operations usually performed on the face had been satisfactorily

accomplished during insensibility from this agent. The narcotism had been kept up to a full extent for a long time, no unpleasant effect had been produced on the larynx or on respiration, and the patient, as usual, had been unconscious of what was going forward.

Mr. Fergusson then proceeded to divide the tumour longitudinally, and the latter proved to be of the cystic kind, presenting a cavity which would have lodged a small orange. It was filled with a fœtid secretion, the shell of bone forming the walls of the cyst being generally about a quarter of an inch thick. It was now evident that the cyst had been formed by a dilatation of the walls of the jaw, and was lined by the same kind of membrane which is seen in chronic abscess. This membrane had now passed into a state of gangrene, probably from the caustic solution which had been used. The patient progressed very favorably, with the exception of a little cough, and discharge into the mouth. On the fourth day after the operation, the line of incision was closed by first intention; there was no pain, but the mouth was a little drawn to the left side. On the eighth day the patient was allowed beef-tea, eggs, and some veal. On the thirteenth day, he began wearing the silver apparatus between the front teeth, on the left side, so as to counteract the usual traction towards that portion of the face, and also in order to give support to the mouth and soft parts.

On the fifteenth day the patient left his bed, the wound being almost completely cicatrized, and soon afterwards he was discharged in a very favorable condition, being able to masticate tolerably on the left side, and not having experienced great prejudice in his articulation or appearance.

The formation of cysts within the substance of bone is not a very frequent pathological occurrence, though it is doubtless one which it is important to recognize and distinguish from malignant disease, as it is so amenable to remedial means. The history, shape, absence of pain, peculiar secretion, and crackling sensation, will for the most part be sufficient guides; the only growth with which these cysts might be confounded being another kind of cyst, well described by Dupuytren, containing a solid fibrous mass. The disease existing in Mr. Fergusson's patient is analogous to the affection mentioned by Mr. Stanley, in his work on the Bones, (p. 267,) "Membranous cysts, containing a glairy



fluid, originating within the jaw:—These cysts, in enlarging, usually cause expansion of the walls of the jaw, and they are found to possess more or less complete osseous parietes, apparently formed by hypertrophy of the cancellous structure of the jaw. Occasionally the membranous cysts, instead of expanding the walls of the jaw, cause the absorption of its outer wall, so that the tumour they form projects on the outer side of the jaw. This disease is usually of slow growth, and there have been instances in which the tumour of the jaw formed by it has acquired a large size.”

The various circumstances connected with Mr. Fergusson's patient would tend to show that remedial agents have very little power over the growth and development of these osseous cysts, except, perhaps, they were very early attacked from without, when they do not show a tendency of protruding into the mouth. The present case will yield an additional proof of the comparative safety of removing one side of the lower jaw, and confirm the well-known fact that operations upon the inferior maxilla are much more likely to be successful than those upon the superior. The records of surgery afford many examples of a successful issue after removal of larger or smaller portions of the lower jaw.

Mr. Fergusson stated in his remarks that this case might seem decisive as to the propriety of using chloroform in operations upon the face; and it certainly appears that apprehensions are far too anxious in this respect. The patient, who had assumed the recumbent posture, was perfectly insensible through the whole operation, as Dr. Snow, who administered the anæsthetic agent, carefully held a sponge, dipped in chloroform, close to the patient's respiratory inlets, and thus succeeded, without obstructing the operator, in keeping the man in a perfect state of narcotism.

In examining the patient, just before he left the hospital, we were struck by the small amount of deformity produced by the obliteration of so important a portion of the face; and as Mr. Fergusson had not divided the red portion of the lip, the continuity and symmetry of the mouth was uninterrupted, and the lines of incision hardly distinguishable. This result is the more satisfactory, as it may be presumed that fibrinous matter will in time be thrown out, and give the parts an useful amount of firmness. The small amount of hæmorrhage during the operation

will go far to prove that Mott, Cusack, Walter, Græfe, and Gen-soul, were rather too timid when they tied the carotid artery previous to the operation. Lisfranc very wisely dispensed with this preliminary step.—*London Lancet*.

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### THE GOLD USED BY DENTISTS.

In a paragraph in the Times lately, entitled “The Gold Used by Dentists,” it was stated that the impure metals and bad gold used for plates for the mouth, were productive of great disturbance to the health, being often converted into poisonous oxides; and the writer suggests as a remedy for such practice, that every plate should be *Hall-marked* in the same manner as gold watch-cases, &c. This plan might do—but how is it to be enforced? as a vast many ignorant, vain persons will suffer any thing rather than expose what they are pleased to call “their misfortune,” or as they ought to designate it, their “childish weakness!” The loss of teeth is indeed a great annoyance, as affecting personal comfort and appearance, but still there is not, therefore, any absolute necessity that unprincipled charlatans should aggravate the evil by using base metals.

Respectable dentists use eighteen carat gold, which is good enough to be stamped. They could not use it pure, from its extreme ductility, as plates made of it in the latter condition would bend. But even the very best gold that is used, however slightly alloyed, will often induce a perceptible galvanic action in the mouths of individuals of a strumous habit.

It is, therefore, not surprising that the “Cheap-Jack Advertisers” should not be very particular as to the quantity of alloy they use; some of their dupes suffer such a constant abnormal secretion of saliva, that it becomes a chronic ptyalism; and if the plates in this state are examined, they are found coated with a green oxide of copper!

The remedy for this class of evils is of a two-fold kind: that that there should be more real knowledge disseminated among the people, and a College of Surgeon-dentists, so as to enable the public to distinguish the respectable man from the mere charlatan.

I am, sir, yours, &c., J. LEVISON.

Devonshire-place, Brighton, April, 1851.—*London Lancet*.



*On Cements for the Teeth.*—By J. L. LEVISON, Esq., Brighton.—Mr. Levison, of Brighton, comments in terms of deserved severity on dentist's handbills, such as one which he encloses to us, relative to a certain "sucedaneum." On the matter of cements generally, Mr. Levison states, "I have often had to impress the unfitness of using alloys and amalgams in the mouth," and he refers to a paper which he published in 1829, in which—

"By well-observed facts, it was shown, that whenever *two* metals are used, even gold and silver, there is invariably a chemical change in the saliva, by the formation of an acid *sui generis*, as shown by the removal of the lime of the teeth. In the *Lancet*, of the year 1831, I entered into greater details, showing that mercury and tin, mercury and silver, or bismuth, tin and lead, (compositions which form the succedaneums and fusible cements of dentists,) produced still more destructive consequences. These papers," he adds, "were published long before the American dentists waged war against amalgams, or inflicted on those who used them the pains and penalties of drumming the delinquents out of those associations which ornament the profession of dental surgery on the American continent."

Mr. Levison concludes his communication with an anecdote, to show that the pretensions of quacks often make thoughtless persons insult men of principle, and qualified practitioners.

"A lady called to have a tooth stopped: without waiting to ask the dentist what he used, she said, 'I must have it stopped with cement.' 'I do not use it,' was the reply; when the patient said, somewhat pertly, 'I suppose you can't.' The gentleman felt indignant at this gratuitous insult, and told the lady that 'it certainly required very great skill and profound knowledge to put something *soft* into a cavity; that he would therefore insist on her remaining to see him do such a marvellous feat,' and having, before her face, made an amalgam of tin, he said, 'You perceive I can make the cement, but I never have, nor ever will use it.' The lady colored deeply, and asked him, in more respectful language, what he did use? He told her pure gold. She had her tooth filled with gold, and retained it for some years without pain or fœtor."—*London Lancet*.

# THE DENTAL NEWS LETTER.

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JULY, 1851.

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## A LITTLE CHAT WITH OUR SUBSCRIBERS.

We commenced this volume with thirty-two pages to the number. To the third number eight pages were added, and to this number eight more are added, making *forty-eight pages to the number*, at which size we design continuing the next volume of the News Letter. We shall continue the subscription price at *one dollar*.

Now to sustain this increased size, we desire more original matter, and as many in the profession have much to communicate in *conversation*, we wish to induce them, if possible, to put upon paper their thoughts and experience, which they have heretofore neglected to do, either from culpable modesty, or from a disinclination to write; but this is reprehensible and should not be. We repeat again what we have often said before, that it is unfair to be profiting from others' experience and not reciprocating in some way. The day for secrets in the practice of dentistry has gone by—principles are well known, but the difference in treatment or practice is what we want. If we could then, induce all reputable practitioners to give to the profession, through the medium of some of the dental periodicals, their various modes of treatment, with all anomalous cases of curiosity or interest, what a fund of information and instruction would be derived, and comparatively with but little labor, and to the great advantage of all. We could enlarge upon this subject, but space forbids, and we will only say further, that we hope the truth of our position will be acknowledged by many, in setting about correcting at once their former negligence.

We invite communications on all subjects connected with dentistry.

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*Errata from January Number.*—On page 50, fifth line from top, the word mnemotechny is spelt with a *p*, which should be an *m*.



*The American Society of Dental Surgeons.*—This society, we understand, holds its next meeting in Philadelphia, early in August.

If we had any voice in the matter, we would move that the whole dental profession in the city and county be invited to attend its sittings and participate in the discussions; that thus its usefulness may be increased, and a more general spirit of harmony and fellowship be engendered. What say you, gentlemen?

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*Ohio College of Dental Surgeons.*—We would call attention to the advertisement of this useful institution, which will be found on another page.

This college is now, we are informed, in the enjoyment of far better prospects than at any time previous, and we wish it, as it deserves, abundant success.

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I. B. B. is informed that his communication was received, but not in time for this issue.

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#### BUSINESS NOTICES.

*Corundum.*—We have just received from England a large quantity of this article said to be of a superior quality, which we obtained with some considerable difficulty in consequence of its scarcity. We shall use all despatch in making up some wheels, slabs, etc.

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*Platina.*—We have made arrangements in Europe for constant supplies of platina plate and wire, also very thin plate for batteries, etc., and are prepared to supply all orders at a fair price.

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*New Postage Law.*—In consequence of the reduction in postage, we wish to make the following proposition to our customers: If they will pre-pay their letters to us, we will pre-pay ours to them, unless of considerable amount, in which case we will pre-pay and charge them.

By this arrangement of pre-paying much will be saved by both parties.

JONES, WHITE & Co.

For the Dental News Letter.

LONDON, June 5, 1851.

*Gentlemen*:—As promised in my last, I can now give you some slight description of the articles of dentistry on exhibition at the “World’s Fair;” but I fear you may think it very meagre. If so, I can only say the display is meagre—far, far short of my anticipations. Dentistry in Europe affords but a limited subject for a long letter, for the reason that the mass of the work is after the same style, although with different degrees of finish, and in describing one collection all are described.

In all my researches through the exhibition, I found the following:

One case only from Switzerland, which consisted chiefly of bone work, or teeth carved from the hippopotamus, porcelain teeth on bone bases, and one or two cases of French teeth, on plates which were very narrow, and the soldering very rough. The clasps, from their arrangement, were well calculated to injure or destroy the teeth which they embraced. There was one case of human teeth, mounted on gold plate, which was neatly done, and an apparatus for regulating the teeth, which was very complicated and cumbersome, and which was to be attached to the teeth with strings. I may say of the bone work that it was neatly and ingeniously carved.

I may say here that I formed the impression that spiral springs are used to a much greater extent here than with us.

From France I could find but one specimen case, which, for size and the quantity of work it contained, was quite sufficient to represent the whole “Republic.” At a venture, I would say there were at least fifty different specimens in the case, among which were some nine full cases, in active operation, chewing away lustily; also an entirely new plan of exhibiting, to the best or worst advantage, the want of teeth, after this fashion: as the jaw opens, two or three teeth in the upper jaw slowly move out of sight, leaving an ugly space, particularly remarkable when the jaws come together, then when the jaws open again, these two or three teeth come back to their place, and show the beauty of a perfect set of teeth. Another case is made to revolve slowly, by pivots in the sides, thus showing the shape and workmanship all around, also a great number of small pieces of bone work,



or French teeth, on very narrow gold plates, and the clasps made by continuing a small strip of the plate to bend around the adjoining teeth, all beautifully finished and showing much ingenuity, but very unsubstantial and temporary. This collection was a fair exhibit of the majority of French workmanship, only of better finish; and just such cases, only smaller, may be seen at the doors of most of the dentists in Paris, besides numerous flaming placards on the walls, and abundant advertisements in the newspapers, setting forth the superior abilities of Monsieur so and so, surgeon dentist.

From Prussia, one case containing specimens of artificial teeth and samples of the material, which were very similar in style to those made by the French, but hardly so well formed. As some of your readers may not have seen the French teeth, I will endeavor a description of them. They present the appearance, and are about the thickness of the American teeth, but instead of round pins in the back for soldering, they have three narrow pieces of platina plate, two on one side, and one on the other of a groove which runs longitudinally along the back of the tooth to nearly the cutting edge. In mounting them, a pin suiting the size of the groove, is soldered to the plate upright, and the slips of platina plate imbedded in the tooth are bent over the wire and soft soldered. This makes a clumsy piece of work, and must be uncomfortable to the wearer, because they present such a rough and uneven surface to the tongue; besides, they are not, as may well be imagined, very strong, mounted in this manner; and again, the teeth are very opaque and unnatural in appearance.

Passing over a case or two of no possible interest, I come to the English collection, which is more full than that of any other country.

There are some fifteen cases containing artificial teeth mounted, most of which are, however, bone work. I find that a great proportion of artificial teeth in this country is of this hippopotamus bone, all of which are beautifully carved and very accurately fitted, showing great ingenuity in their adaptation and skill, and rapidity in carving. That "practice makes perfect," is abundantly proven in this branch, and I give them credit for beautiful bone work, as well as highly finished plate work. It is either a misfortune or good fortune, that all this kind of work

has to be done over once a year, at most, which would not suit us Americans, as we could not spare the time, and would not like to spend the means, to have a new operation yearly. One argument used here in favor of bone work is, that there is no grating sensation experienced by the wearer, as is the case, to some slight extent, with porcelain teeth; but I think this objection to porcelain teeth would soon cease, if persons would but wear them a short time, and who would not prefer some slight temporary annoyance with porcelain teeth, to the extreme unpleasantness, if not filthiness, of bone teeth? I would, at least, and I speak knowingly, and I think all who wear bone teeth would, if they but knew the difference in point of cleanliness and permanency. Another plan here is, to mount both porcelain and natural teeth on bone bases, and lastly, porcelain and natural teeth on gold and silver plate; however, the latter material is not often used. All the porcelain teeth manufactured in England are, as many of your readers know, made as thick, if not thicker than the natural organs, with holes through, bushed with gold or platina, a few, however, without any metal lining. In mounting them, the pins on which the teeth set, are adjusted and soldered to the plate in the proper position; previously, however, the teeth are ground to fit the plate accurately, and in this, as well as in bone work, the fit is complete, no space being left for the accumulation of food or other substance. After the pins are all arranged and soldered to the plate, they are coated with melted sulphur, and the teeth are slipped on and pressed to their position, when the sulphur hardens, thus holding the tooth tolerably firm. Another method is, to wrap the pin, previously made rough, with floss silk, and force the tooth on, the tube in the tooth having been roughened also.

I had always looked upon this method of making and setting teeth, after contrasting it with the American mode, as temporary, and I confess my opinion has not changed after examining the variety on exhibition in London.

All the plate work is beautifully gotten up, very highly polished, and neat in all particulars.

I noticed artificial porcelain teeth, deposited by two manufacturers in London, all finely finished and of natural shapes, but opaque, without the translucency of the best American teeth,



and too thick; for, when worn in the mouth, they would, I think, fill it uncomfortably full, and confine the tongue to too small limits.

There were several appliances to dentistry, in the shape of a "universal drill for removing decay in the teeth," at an angle of forty-five degrees, which was worked by a crank in the handle. An "electric galvanic apparatus for dental purposes," which was more complicated than necessary. "A compress for alveolar hæmorrhage," which was arranged to pass over and around the head, well calculated to remind one of a straight jacket or a dog's muzzle in dog days, but not half as important or necessary as either. Also, "a series of mechanical adaptations for regulating and preventing the irregularities of the permanent teeth." There was a collection of gold arrangements for capping, banding, etc., rather clumsy, to my notion, and not to be compared, in effectiveness and convenience, to the application of the spiral spring to the same purpose.

Also, "rotary scissors and knife, for dividing nerves," suggestive of the ligamentum dentis. Also, a mechanical leech, which struck me as being quite suitable for dental purposes, doing away with the repulsive crawling live leech.

I was particularly pleased with a series of experiments which were exhibited, showing the unfitness of bone work and silver plates. This was done by subjecting them to the action of dilute acid, which was dissolving them at a slow rate, then, with a written card explaining the whole matter to the spectator, telling him that the acid in the saliva would likewise decompose the bone and oxydize the silver, though not so rapidly. Many visitors were informing themselves on the subject, and I cannot but think that these public experiments will materially assist in doing away with that temporary description of dentistry.

I noticed some few cases of teeth mounted upon tortoise shell and gutta percha bases, but the first substance, I was informed, would not retain the shape which was given it by heat, but had a tendency and would gradually return to its original shape. The gutta percha was too soft and yielding, especially so when at the temperature of the mouth.

We now come to the collection from the United States, which I sum up briefly. Two cases of block teeth, mounted. One

case of blocks, not mounted. Three cases of gold foil, one of which is from Jones, White & McCurdy. Five cases of mechanical dentistry. One case dental instruments. One case tooth wash and dentrifice. Three cases of artificial teeth, one of which is from Jones, White & McCurdy. And last, though not least, two cases of plugged teeth, one of which is marked simply "Philadelphia," and is, unquestionably, among the best and prettiest fillings I ever saw. They reminded me forcibly of a certain gentleman's workmanship, but whether his or not I would not like to say. However, Philadelphia has the honor of it, which is no small praise. The other case is, to all appearance, very creditable, and they both reflect much honor upon American dentistry.

Of the American teeth here, it, perhaps, does not become me to say much; but this I may say, and I think it is evident to any unprejudiced mind, that they, or some of them, are much more translucent and vital in appearance, more beautifully tinted, and more natural in shape and shade, than any others from any quarter. And when mounted, as it is done in our country, and shown here by several beautiful specimens, (all of which are from Philadelphia and New York,) they can be worn with more ease and comfort, and be more serviceable and permanent than any other style of teeth mounted in any other manner. I may be prejudiced, but I think a fair comparison, by competent judges, will prove the correctness of the above.

The amount of dentistry performed in England is quite limited, in comparison with our own country; for these reasons, probably, that their teeth generally are more durable. Again, it is the upper classes only who can afford it—while in France, their teeth are, to all appearance, quite as frail, and decay quite as soon, as with us; yet there, also, but few can afford to pay for it. In Germany their teeth look as if they would never know decay, and, consequently, the dentist gets but a poor support. I would not neglect to acknowledge the courtesy extended to me by many gentlemen in the profession, among whom I may mention Dr. James Robinson, of London, Dr. Mein, of Edinburgh, Dr. Brophy, of Dublin, Dr. Helsby, of Manchester, and Dr. Evans, of Paris. Many others I might mention, but they will all receive my hearty thanks, and I can only say, I hope I may have the opportunity of reciprocating, in some way. With Dr. Evans,



who is an old acquaintance, I felt quite at home. And I will just say here, that America bears off the palm in dentistry; for Dr. Evans numbers among his patrons the Kings of Bavaria, Prussia and Greece, and the President of the French Republic, beside numbers of the nobility, among whom are several prominent persons at the Court of the Emperor of Russia, and all obtained through several difficult but successful operations performed for persons high in office and influence at some of the above-named courts. I wish him success, with all my heart, as he well deserves it.

To conclude this very long and desultory letter, I would say, that great quantities of amalgam are used in France and Germany, and much in England, and oftentimes the filling is put in without removing the decay. Low grades of gold plate are used, also some silver, and, occasionally, palladium.

The prices, so far as I could get at them, range about as with us, some getting high rates, and some working very cheap for very cheap work. Occasionally, however, as with Drs. Brewster and Evans of Paris, a large sum is received for an important operation, when performed for an important personage.

In haste, yours, truly, J. R. McCURDY.

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*A Popular Treatise on the Teeth: Designed for the Use of Families, and as a Manual for the Student and the Practical Dentist, etc., etc.* By MAYO G. SMITH, Dental Surgeon, Boston.—This work purports to be more of a popular than a professional character, yet claims somewhat of the latter. We are, however, altogether doubtful as to the utility of such works, as they are not generally sufficiently elementary for the mass, and, therefore, cannot be of a very instructive or explanatory nature, yet assume and advance so much as peculiar, that they beget in the minds of those who read them, an undue confidence in their own knowledge, and thus induce an attempt to apply that so acquired to the treatment of their own and others' diseases, producing, in this way, more extensive and irremediable injury than an ignorant practitioner; for he would have at least the advantage of an experience, more or less extended, to guide him; besides, his failures are, of necessity, comparatively few, whilst the former may be illimitable, being proportionate only to the diffusion of the book. But when it is attempted to combine in the

same work, matter for both the professional and popular mind, it must necessarily prove a failure; for that which would be interesting and instructive to the former, would be too abstruse for the latter, while that adapted to the latter would be of no value to the former, comprising, as it does generally, those things which had been long since acquired, whilst they would only mislead the student by furnishing, in many instances, incorrect ideas and views of the subject. And also, if there should be any errors, either of the writer or printer, in the directions for treatment, such might prove fatal if acted upon by the uneducated, while the educated or professional person would detect, avoid, or correct them, and thus prevent their otherwise injurious and even fatal results. For example, on page 97 of the work under consideration, in treating of diarrhoea from deciduous dentition, the author recommends clysters of starch containing *twenty drops of the tincture of opium* or laudanum. Now, we assert, that if such directions were followed, the majority, if not all, of the infants so treated would die from poisoning, as it will be seen by referring to the United States Dispensatory, that 25 drops of this remedy is considered a full dose for an adult; and abundant evidence of the power of this drug, if such were wanting, is furnished in the disastrous effects of very much smaller doses, in the recent deaths of several children in New York city. Hence the *evil tendency* of this and similar general directions must be apparent; and as in one case, so in many others, and even to the *other* extreme, in which treatment, equivalent to nothing at all, is brought forward as remedials. Thus, for instance, the placebos of various quack practices, also recommended in the work, thereby causing sufferers to neglect their own cases, by this experimental mode of treatment, until they assume such a condition that no course of treatment, no matter how skilfully instituted, can be of service; whilst if in their incipency they had sought the counsel and aid of those properly qualified, the evil might have been speedily corrected. Notwithstanding these views, we heartily coincide with the author in the hope that a knowledge of the anatomy and physiology of the human body, will soon form an indispensable part of the preliminary education of the young; believing that a correct appreciation of this subject would prevent many of the evil practices now prevalent, and



thus advance the welfare and contribute to the happiness of mankind. With regard, however, to the work, it contains some facts of interest and value to the profession, and we therefore commend it to the attention of those desirous of acquiring all that is known upon the subjects of which it treats.

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### I HAD A TOOTH.

A PARODY — BY I. B. BRANCH, DENTIST.

I had a tooth, which was not all a tooth,  
Part of the crown was gone, and now and then  
A gentle twinge, from 'neath its hollow walls,  
(Rayless, and dark, as are the caves of earth,  
When blind and blackening in the moonless air,  
She swings, awaiting morn), warned me to seek  
The Dentist's aid. But I forgot, full soon,  
Each pang, in dread of Dental operation.  
Friends' hearts seem'd chilled into a selfish prayer,  
That I would have it filled, and shun the throes  
From places in the crown—those habitations  
Where microscopic thousands safely dwell.  
Warning beacons came, whene'er cold water  
Waked those insects in their ivory homes,  
Yet came in vain; with zeal I sought to shun  
The Dentist's hands, until my swollen face  
Drove all my peace away. Had no keen eye  
Of pure volcanic mirth, kindled its torch  
At my distorted phiz, 't were well. One hope,  
One fearful hope, was all my heart contained;  
E'en that was set on fire, and hour by hour  
It fell and faded—"And must this throbbing trunk,  
Exhumed by iron hands, be torn away"—  
My brows grew pale, and in the broad daylight  
Wore unmanly aspect. And as by fits  
The pangs returned upon me, I laid down,  
And hid my eyes, and sought in vain for rest;  
Then with my chin upon my clenched fists  
I said, "Oh that I'd had it filled in time"—  
Then next I tried that burning "oil of smoke,"  
In mad disquietude. Meanwhile the sky,  
And all the world, seemed mocking at my pain.  
Then came another pang, more fierce than all;  
I gnashed my teeth, and howled, and wildly shriek'd,  
And my full heart did swell and rise, as if,  
With powerful wings, it would at once escape—  
Then tame, and tremulous, 't would seem to crawl  
Away, and twine around my fortitude,

Hissing, but stingless — eating it up for food.  
 The pangs which for a moment were no more,  
 Did glut themselves again. — Each meal was bought  
 With pain — each mouthful, sullenly apart  
 Was bolted down unchewed. No patience left,  
 All center'd in one thought; that thought was death,  
 Immediate, and inglorious, to each fang,  
 That was the filthy cause of all that pain,  
 Which fed upon my *nerves*. “This aching tooth  
 Shall die! Its bones, tombless, shall be consumed  
 When once it is assailed — I'm master then.  
 The filthy, useless thing, long, too long kept  
 And nursed, lest it should hold my rest at bay  
 Till morning dawned. Or lest, when once 't was out,  
 My jaws grow lank as if they wanted food.”  
 This said, with piteous look, I sat me down,  
 Beneath the hand, that gave the fatal grip —  
 Then came one quick, shrill, desolating cry —  
 The tooth was out — pain vanished by degrees,  
 There lay two roots of an enormous size,  
 And they and I were enemies. Full soon  
 The glowing embers of the fireplace,  
 Kept for such usage, raked up  
 And taking their cold skeletons in hand  
 I blowed as if for life, and made a flame  
 Which was no mockery. Then I lifted up  
 My hand and threw. Then thanked the Dentist  
 And inquired how loud I shrieked, when died  
 That tooth of mortal hideousness.  
 It was a tooth upon whose crown decay  
 Had written fiend.

The place is void,  
 And that “populous” and “powerful” lump  
 Of ivory in decay, is lifeless now.  
 A lump of lime — a chaos of ashes,  
 No bloody rivers traverse its channels now,  
 And nothing stirs within its silent depths.  
 Patience slept, upon a waveless sea,  
 That long had tossed her madly to and fro,  
 And all was still; I laid me down and slept,  
 Without a dream. My pain was gone, my tooth  
 Was in the grate. The moon (fair mistress still)  
 Looked calmly down that night, and bade me rest  
 In peace. The clouds pursued their way, as if  
 They ne'er had seen an aching tooth:  
 And all was *Peace*. To me peace was the universe.



## DR. TAYLOR ON FILLING TEETH.

*An Address delivered before the Mississippi Valley Association of Dental Surgeons, at Cincinnati, September 10, 1850.*

BY JAMES TAYLOR, M. D., D. D. S.

GENTLEMEN OF THE MISSISSIPPI VALLEY ASSOCIATION OF DENTAL SURGEONS:—We convene on the present occasion in accordance with the requisition of that constitution which binds us together as a society. May we not with profit take a retrospect of the past year, and refresh our memories with the many mercies enjoyed? Disease, like the Simoon's blast, has swept over the land. Thousands have fallen. We are preserved. A merciful Providence has kept us, and so far as I know, not one of this association is numbered with the dead. The scourge has passed; health, peace, and plenty abounds; and the dried-up streams of social life, which had been blasted and checked during the prevalence of the epidemic, begin again to ebb and flow with their accustomed healthful and benign influence; and on the tide of this renewed and reviving stream of social life, we are permitted again to assemble and consult on the best interests of our profession.

Let us endeavor to do this with a proper feeling of our individual responsibility, duly impressed with the importance of the profession to which we belong. "Let us press on towards the mark for the prize," each endeavoring to bring into the grand depot of dental knowledge something which shall benefit our race, and give our science a still larger claim on the confidence of an enlightened public.

We meet to compare practice, to receive and impart useful knowledge, to spend a few days in the discussion of scientific subjects, and extend to each other that fraternal feeling which should ever characterize those of the same profession. Let us, therefore, throw aside every feeling but love—love for each other, and for that truth on which the temple of our science must be erected. Let every sentiment, every preconceived opinion, be held subservient to this great principle—this broad platform on which all true science must stand. We meet untrammelled by any of the *isms* of the day; dental science being only a speciality of general surgery, stands more securely aloof from the innovations of the age. No Homœopathic dose will suit in the extraction

of a tooth—no Hydropathic ablution can insert a set of teeth; and since the late attempt to introduce steam into the practice of dental surgery, no change has taken place in the regular routine of the profession. In the west we have happily escaped even the heat and excitement of the amalgam controversy. I know not if even the southern improvement on the screw has been able to disturb in a single instance the equanimity of any member of this society.

Medical science, in all its branches, constitutes one of the most instructive and ennobling studies in which we can engage. Instructive, because at every step we behold the continued exhibition of infinite wisdom; and as we advance and learn more and more of the mysterious frame-work to which this science is applied, we can the more fully enter into the feelings of the psalmist, until we with him can exclaim: "Man is fearfully and wonderfully made."

The study is ennobling, because it teaches us the frailty of man—our utter dependence on a power Supreme. It takes us from the study of nature to nature's God—points us back through the long vista of time, to a period when perfection was stamped on all the work of creation. Man was perfect; disease and death knew not a victim. Imagination can scarce do justice to the picture of man in his perfection. Every movement is ease, and every muscle acts its part in perfect harmony. No blot or blemish is to be seen. The ear catches the most distant sound as its vibration strikes on its delicate and finely attuned tympanum; melodies afar as by angels sung, are caught on the passing zephyrs. The eye pierces the distant horizon, and beholds spread out in the vast panorama a broad and extended domain filled with the beauties of a beneficent Creator. Every sense is attuned and works harmoniously; each organ is in unison, and the teeth present a perfection but rarely if ever seen. But man fell, and disease and death has ever since made sad havoc on the human race. The most dense and indestructible part of our system is not exempt from this direful calamity; and the teeth with their beautiful enamel; hard and compact in its basalt-like columns, capping and shielding the hardest portion of the osseous structure, also yield to the fearful sentence: "Dust thou art, and unto dust thou shalt return." Thus man has been made to feel,



that to prolong his days he must employ all the aids which God in his mercy has scattered in rich profusion around him. This feeling of self-preservation has led to an investigation of almost every material substance in nature, until their constituent principles and remedial effects have been discovered.

How delightful the task to mitigate the sufferings of a fellow-being, to arrest disease in its rapid progress, and give ease and comfort. This is our privilege, and well does it repay for days, and months, and years of labored study.

But, gentlemen, I would not forget that our meetings are designed to be of a strictly practical character—that however pleasant it might be to speculate on the gradual approach and development of disease, and that science which points out a remedy, yet at this time I have another subject assigned me, and hence must forego this pleasure, and call your attention at once to the operation of filling teeth. It will be recollected that at the close of our last meeting this subject was under discussion.

I am aware that it is a difficult subject to handle. There are many difficulties which so often occur in the proper performance of this operation, that to anticipate them at all times is almost impossible, and they are even difficult to describe. I therefore do not expect to do the subject justice. I can only hope to in part describe my mode of operating, and elicit a free and full discussion of the subject.

There is no operation in dental surgery so important—none which is capable of affording so much of real service to our patients. The operation of extraction, it is true, is often of vast importance and absolutely essential to the health and comfort of an individual, yet how seldom would this be necessary if the former was resorted to in time, and successfully performed. The operation of filling steps in as a preventive to extraction, and the perfection of our science would do much to prevent the need of the latter.

To be continued.

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*A new and expeditious mode of getting teeth inserted.*—A down-east editor advises his readers, if they wish to get *teeth inserted*, to go and steal fruit where a good watch-dog is on guard.

# SEVENTH ANNUAL ANNOUNCEMENT OF THE OHIO COLLEGE OF DENTAL SURGERY.

SESSION OF 1851-52.

The regular course of Lectures in this Institution commences the first Monday of November and closes on the 20th of February.

## FACULTY.

JAMES TAYLOR, M. D., D. D. S., *Professor of the Institutes and Practice of Dental Surgery.*

THOMAS WOOD, M. D., *Professor of Anatomy and Physiology.*

GEORGE MENDENHALL, M. D., *Professor of Pathology and Therapeutics.*

JOHN ALLEN, D. D. S., *Professor of Operative and Mechanical Dentistry.*

G. L. VAN EMON, A. M., D. D. S., *Lecturer on Dental Chemistry and Demonstrator of Operative and Mechanical Dentistry.*

The Faculty would take the present opportunity to announce to the profession the organization of the Ohio College of Dental Surgeons on a permanent basis. The College building, anatomical preparations, Dental Museum, &c., &c., have been purchased by an association of members of the profession, and permanently set apart by them and their successors as an institution for the promotion of Dental Science. The appropriation of three thousand eight hundred dollars for this object, by the stockholders, has been done with the strong conviction of the necessity of such an Institution; and that it may entirely meet the wishes of the profession at large, this association has nominated to the Trustees the present Faculty, and which by them have been appointed to their respective chairs.

It is the design of the faculty to make the course as thorough and practical as possible.

The increasing demand for gratuitous operations in the Dental Infirmary, now hold out to the student every inducement which can be desired. The daily operations in this department of the college affords opportunity for every student to engage in practice. During the last session near one hundred teeth were inserted, besides a great deal of filling, extracting, &c., &c., and toward the close of the session more patients applied than could be attended to by the class.

The arrangements in the laboratory will be such as to afford every facility in mechanical dentistry, and a Demonstrator of acknowledged capacity has been selected for this department.

The Anatomical Rooms and Dental Infirmary will be opened on the first of October.

The object of the Dental College has always been, to combine with that mechanical knowledge which is requisite to the successful dental practitioner, the general principles of medical and surgical science; always keeping in view the fact that dentistry is a part of the same general science, subject to, and governed by the same laws, that dental operations, not based on a correct knowledge of anatomy, physiology, therapeutics, &c., will most likely prove injurious to the patient, and keep up that general prejudice to the profession, which has been generated and kept alive by ignorant and empirical operators. The course will, therefore, be such as to insure a thorough medico-dental education.

The committee for the examination of the graduating class will be filled up by the issuing of the annual circulars.

Tickets for the entire course, including Matriculation fee, \$100 00

Diploma fee, - - - - - 25 00

Good board can be had from \$2 to \$3 per week.

JAMES TAYLOR, *Dean.*



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows:

"This case is considered worthy of a special notice, for the following reasons:—The exceeding *vital* appearance which the teeth *maintain* when exposed to the *test of artificial light*, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The *manner* in which the *platina pins* are inserted, is also adjudged to be a *decided improvement*. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on next page cuts of our principal medals.

## GOLD MEDALS.



Vol V

No 1

# THE DENTAL NEWS LETTER.

Vol V

OCTOBER, 1851.

For the Dental News Letter.

## ARTISTIC DENTISTRY.

*An Essay read before the American Society of Dental Surgeons, at their Twelfth Annual Meeting, held in Philadelphia, August 5, 1851.—By A. HILL, D. D. S.*

GENTLEMEN OF THE AMERICAN SOCIETY:—The subject of the present paper I have entitled *Artistic Dentistry*. My object has been to draw out before the mind more distinctly certain topics not generally noticed with as much particularity as the subjects seemed to demand.

It has occurred to me, that this department of our profession has not received that attention, from those who have written upon dental subjects, to which it is entitled.

Many able pens have been employed to much advantage in setting forth, in all their minuteness of detail, the different *mechanical* contrivances and the various modes of their application, so far as they are considered essentially useful to the practitioner of Dental Surgery.

Anatomy and Physiology.—Chemistry and Materia Medica, with general Therapeutics, have each contributed with a good degree of liberality their respective quotas to ennoble and enrich this useful profession.

But I respectfully submit, that neither the skill of the accomplished surgeon, nor the ingenuity of the industrious mechanic, is adequate to the full accomplishment of that which is aimed at by the members of the dental profession, or demanded by the wants of those who require their services.

The physician may exhaust his skill in the treatment of disease; the surgeon, as a last resort, may be required to amputate a limb, or remove a dangerous cancer, and acquit himself perfectly in the dexterous use of the *knife*, the *saw*, and the *bandage*;



and as the poor patient recovers, minus one or more of his limbs, his services are no longer requisite—his legitimate work is done.

The artistic skill of one, who has an eye to the beauty of *form* and *proportion*, may now be summoned, who shall mould a limb and form a foot with so much excellence, as to compensate to some extent for the loss, and almost rival nature herself, in its beautiful adaptations.

But not so with the dentist. It is demanded and expected of him that he fulfil the several and distinct functions of the physician and surgeon, the mechanic and artizan.

He must not merely treat diseases of the mouth and teeth, in all their various relationships and multiform sympathetic connections, but he must extract, clean, regulate and restore, file and fill, and thus necessarily invade the domain of the surgeon, mechanic, and artist.

What wonder is it, that comparatively so few are competent to meet and fulfil the public expectation in these various particulars.

And how sadly mistaken is he who supposes that a few weeks, or months at most, are sufficient to qualify himself for the duties of such a profession.

In strict language, surgery may be defined to be “the act of healing by manual operation.

Art, as applied to our profession, may be considered distinctively, as in those cases where the mind or the imagination is chiefly concerned, and may not improperly be classified with the more liberal, polite and elegant arts of *poetry*, *music* and *painting*.

Emotions, as distinct as the prismatic colors of the rainbow, are known to supply the necessary inspiration in each of these several departments; and yet they may become blended in such a delightful manner, as to leave no distinct and perceptible trace of the precise line of their union.

The difference between the mechanic and the poet, the musician and the painter, can only be properly comprehended by a careful analysis of each.

It will, however, be sufficient for our present purpose to take one or two illustrations, by which these characteristic marks of distinction may be seen, and rendered applicable to the subject we have taken in hand.

The eye of an ingenious mechanic may sweep over a beautiful landscape, embracing

“ Upland grove and dell,”—or  
Mountain, valley and river.

But how entirely different are his emotions from those of the genuine *poet*, *musician*, or *artist*? Observe them for a moment. You will see

“ The poet’s eye, with a fine phrenzy rolling.”

You will see his soul displaying itself over every lineament of his face, while he drinks in the delicious inspiration of the scene. The musician hears the dim

“ Music of the spheres”—

The babbling music of the brawling brooks, the choral anthems of the feathered songsters, until his wrapped soul can be silent no longer. Meantime the artist is reveling in all the beautiful combinations of light and shade—the sunlight that mildly quivers on the mountain-top, and streams in softest beauty down into the valley below. And those elegant tints of multiform foliage display themselves before his vision, until he instinctively seizes the pencil and transfers them to his canvas.

How various—yet how distinct, these impressions!

The poet breaks out in a rhapsody—the musician sweeps his lyre—the artist is seated at his easel—while the mechanic is coolly and tamely querying within himself as to “ what trees will make the best shingles,” and how the timber, which he sees before him, can be best made to subserve the purposes of his calling.

And these characteristic marks of distinction are not altogether peculiar to those individuals which we have named, but are a frequent matter of observation among all classes of men, and in every department of industry.

The peculiarity of which we speak, constitutes the difference between the coarse blunt form, rude spars and unwielding movements of an old Dutch ship, or a Chinese junk, and the elegant clipper-built vessels of the present day. The former resembling nothing but the most ungainly things, either on sea or land, and would almost puzzle a stranger to tell whether they were ever intended for nautical purposes or not. While the latter, so beautiful in their proportions, so symmetrical in their arrangements, and



perfectly adapted to the purposes for which they are designed, may justly be said to "Walk the water like a thing of life."

It is the display of artistic talent, in combination with high attainments in the mechanic arts, that constitutes this difference, not merely in the cases we have cited, but in every department of genius and industry.

Having briefly called your attention to the subject, with a few illustrations designed to show more distinctly the peculiar topic we have chosen as the subject of the present paper, we will now proceed to point out its more pertinent application to our profession.

In the manufacture, adjustment, and adaptation of artificial teeth and their appendages, this principle finds its fullest scope. No other branch of our profession offers a field so inviting and ample as this, in which to display true *artistic* skill (as distinguished from pure mechanical and scientific attainments) as this department of dental operations.

It is absolutely indispensable here from first to last. From the *moulding* and *carving* of the clay itself, to the *painting*, *glazing* and setting, *artistic skill* alone can insure success.

The carving of mineral blocks is a species of sculpture where the truest and most clever artist cannot fail of distinction. Even Powers himself, were he to employ his genius upon a matter of this kind, would, I doubt not, exhibit the same masterly hand that has so exquisitely moulded the inimitable statue of the Greek Slave. And that which distinguishes one piece of this kind from another, is the same thing that distinguishes all his chaste and beautiful productions from the inferior specimens of those who would fain emulate his unrivalled excellence. And it would be almost as proper to compare some of those specimens which we sometimes see upon tomb-stones in some of our country graveyards, with these gems of art, as to institute a comparison between the productions of some who are laboring in this department of the dental profession. Great strength some of them most undoubtedly have, and so have our New England ox-carts; and they will "stand the fire," and so will the "Salamander safes." "They will do for grinding," so will mill-stones; and if these qualifications (which, by the way, are very essential) are the only

ones to recommend them, the day has gone by when they will be very likely to find a market.

But it affords me great pleasure to know that there are those in our own country, who cater to the wants of the community in this regard, who have no need to be ashamed of their productions. And some of them, *especially*, seem to have left but little more to be desired, in order to render an artificial denture all that the most sanguine aspirations of the profession have ever anticipated.

No specimens which I have seen, have served more to deepen this conviction upon my own mind, than some of those beautiful specimens from the laboratory of Jones, White & Co. Here is something besides those qualifications above referred to, as being common to the *ox-cart*, the *Salamander*, and the "upper and nether mill-stones."

Observe them, and you will see the delicate touches of the artist's pencil, displaying the skill of something more than a *mere* amateur in this business. Those delicate shades around the festooned borders of those *gum-teeth* are such as, when properly mounted and adapted to the mouth, almost rival nature herself in her beautiful productions.

But I am happy to know that these gentlemen are not alone in running this race for distinction. Others are ably competing for this prize, and to whom the final award of superior excellence will be made, is certainly more than I am able to say.

Among others, whose elegant productions are worthy of being mentioned as further illustrative of the peculiar feature we are seeking to develope, the names of such men as Stockton, Alcock, Morton, Crosby, and many more, probably, whose specimens we have never had the good fortune to see, should not be omitted.

We thus particularize, not by any means to seem invidious, but first, to illustrate this feature of our subject; and secondly, to award praise where it is unquestionably due.

The rapid strides of this rapidly advancing department of our useful profession have, for the last few years, been such as almost to pass the bounds of credibility.

This advancement, especially in *Artistic Dentistry*, may be very clearly seen by attending for a moment to the following extract from a work on Dental Science, published in 1834. The



work is entitled, "A Treatise on the Anatomy and Physiology of the Teeth, &c.: their diseases and treatment, with practical observations on Artificial Teeth, and rules for their construction. By David Wemyss Jobson, M. R. C. S. E., Dentist in ordinary to his Majesty, and to his Royal Highness the Duke of Sussex," &c.

Now, with such a flourish of trumpets in 1834, what do we find upon the subject of artificial teeth? The following extracts from his pen will show. He says:—"Artificial teeth have also, of late years, been made from a *porcelaneous substance*, and under the name of "mineral" and "terro metallic" teeth, have afforded an extensive range for empirical deception. The attraction held out is their alleged "incorruptibility," by which term the unwary are entrapped and led to believe that teeth of this description are much more durable than the natural ones, *i. e.* natural teeth artificially used.

"The very reverse of this is the case. For although they are not subject to change of color, yet they are in every instance so brittle, as to be easily broken off on coming in contact with those of the opposite jaw. \* \* \* \* \*

"When these mineral or China teeth were first introduced into this country from France (for it is to our neighbors on the opposite side of the channel that we owe these as well as many other similar ephemeral productions) the greatest mystery was affected on the subject of their composition, although any of our potters, or porcelain makers, could easily have disclosed it. \* \* \*

"The most extravagant expectations were then formed from them; although few, or rather none of the advantages which they were supposed to possess, have been realized, and they are now considered to be a complete failure. They have never been much used by the leading dentists of the day, and I believe are now wholly discountenanced by the respectable part of the profession, although they still reign paramount with the disreputable."

This extract, although somewhat lengthy, serves to show in a very clear light the progress of *artistic* dentistry (at least in this country) within the last ten or fifteen years. And I am thinking that if "Johnny Bull" has not pretty essentially waked up to this matter within this period, that some of those Yankee specimens, now to be seen in the great World's Fair, will very much surprise him. But how oddly these remarks sound to us, who

are now so familiar with these really beautiful gems of the dental art.

In another part of his work, this same writer goes on to describe the process of staining artificial gums made of bone, ivory, and the teeth of the Hippopotamus, by immersing them into a boiling solution of cochineal, red saunders wood and vinegar.

These rude attempts at imitating nature's exquisite pencilings, although but the feeble beginnings of what we now see, yet, nevertheless, contain in them the hopeful prophecy of the glorious future, with respect to art, as applied to our profession.

While we take great pleasure in awarding high praise to those who, in our own day, have achieved so much, candor and truth compel us to say, that with respect to the formation and coloring of artificial gums, the goal is not yet reached. To a certain extent, one artist has copied another, when they should have been copying *nature most critically*. This we think must be obvious, where even the *best* specimens are placed in juxtaposition with the natural gums of a healthy mouth.

In calling attention to this subject in this particular manner, we trust we shall not be accused of the faintest desire to under-rate in the least what has already been accomplished.

But if the moulding, or sculpture and painting of mineral teeth and gums require the exercise of *so much* artistic skill, in order fitly and justly to represent the handiwork of nature, it is only a small part of what we deem essential to their successful use and application.

It is in their adjustment and adaptation to the mouth and face, that real artistic skill, and scientific attainments combined, are more essentially necessary.

The error is quite common not only among Dentists, but throughout the community generally, that *any individual* possessing a tolerable share of mechanical ingenuity, is competent to do this business. But we think the absurdity and presumption of this thing will appear evident to every one who will attentively consider the following hints in their bearing upon this subject.

Every man has a *peculiar*, and in some respects, a *distinctive* physiognomy. And these peculiarities constitute the unerring marks of personal identity. That which makes the individual look like himself and no one else. Now, no feature of the face



can be changed or marred, either by accident or design, without imparting a different character to the physiognomy, and thus changing to a certain extent the relations of the individual. And hence the loss of an eye, or the involuntary contraction of a muscle, or the paralysis of the nerve of any muscle of the face so that its natural play is impeded, may be and always are considered most unfortunate in their effects upon the physiognomy. But by no means more so than the loss or displacement of the dental organs. For here, the controlling influence of these organs are distinctly seen in all the physiognomical relations. The muscles of the cheeks, the moulding of the lips, the relation of the nose and chin, and that delightful play of the features that indicates happiness and pleasure.

In every age of the world, the "human face divine" has been a subject of interesting study and observation; and, to some extent, all men are physiognomists. Not that all men, like Lavater, or the phreno-physiognomists of the present day, are scientifically learned upon the subject; but *instinctively* and *practically*, they are and ever will be so. From the little child that intently gazes upon your countenance, either to be won by its welcoming smiles, or repulsed by its forbidding frown, to the man or woman of hoary hairs, all are practical physiognomists. And it must, we think, be acknowledged that any circumstance or combination of circumstances that are capable of changing the whole expression of the face, and of leaving upon the minds of our children and friends an impression so important and enduring, is not to be disregarded or overlooked. It is of the teeth and the features of the mouth, as related to physiognomy, that these remarks are to be applied.

It has not escaped the attention of close observers upon this subject, that every class of inferior animals, as well as distinct species of the human family, are characterized by the circumstances to which I have referred.

The researches of that great naturalist, Cuvier, has shown that the teeth alone are sufficient to determine the class of animals to which they belong, although the fossil remains accompanying them, may be otherwise deficient. But why is this, if the teeth are not strikingly characteristic?

The teeth of the Carnivora are at once striking and peculiar.

The Gramnivorous and Herbivorous are also distinctly marked. Man, who, strictly speaking, belongs to neither class exclusively, yet partakes, to some extent, of the peculiarities of each, and may, therefore, be said to be Omniverous; is, nevertheless, sometimes characterized by a striking resemblance to some one of these distinct classes. Indeed, this is so manifest in some instances, that these very circumstances will enable us to read the character of the individual possessing them, with as much certainty and almost equal facility, that the Messrs. Fowlers can do it by the superficies of the cranium.

Who has not seen the distinctive marks of the lion, the mastiff, and the bull-dog, in the mouth, teeth and lips of some men? And the cow, the monkey, or the rat, as distinctly in others? And what difficulty have we in predicating certain traits of character, peculiar to that class of animals, of these distinctive signs?

For illustration, suppose we find in the mouth of any patient those sharp pointed teeth, peculiar to the carnivora, so strongly marked as to excite our special attention. I ask is there any risk in affirming of that individual certain traits of character which are known to distinguish that class of animals? Of course, these peculiarities are variously modified according to circumstances, but yet sufficiently marked for the purposes to which we refer. But if you will pardon this seeming digression, I would observe further, that those long, smooth square-edged teeth, peculiar to the *kine* or *herbivorous* class of animals, not only indicate a constitutional preference for a vegetable diet or regimen, but a docile temper and tractable disposition.

These facts (if such they are) are certainly not without their value, not merely in a speculative, but in a physiological point of view. They certainly ought to be considered by the physician whenever required to prescribe a rule of diet for any individual. And they seem to me to militate with no inconsiderable force against the exclusive notions of the so-called "vegetarians."

However interesting it might be to pursue this train of thought, it would make this paper far exceed its intended limits, if we should attempt its complete development. But we have called your attention to it mainly to show its important relation to the subject we have taken in hand.



We shall generally find that these peculiarities, where strongly marked, influence in a remarkable manner the whole physiognomy. The nose and lips, as well as maxillary bones, receive a peculiar conformation, adapted to the denture as it exists or as it once existed. And where the law of sympathy is supposed to act, the relations between the several parts must be established accordingly. Hence we find short, square, and generally strong and regular teeth in short, chubby round-faced individuals. And so uniformly is this the case, that it ought never to be overlooked or disregarded by the dentist, whose duty it may be to supply an artificial denture. We should not be willing to assert that the tallest persons in a community *invariably* have the longest teeth. But we do say that, *ceterus parabus*, this is generally the case.

It is sometimes true that very tall persons have very short faces and small heads. They may be in some instances, it is true, like certain tenements which you have seen in this particular—"Long between joints and low in the garret." In a case like this, you will doubtless find a great disproportion in the length of the teeth, as compared to the body and limbs. But these may be considered rather as exceptions to the rule, than as constituting the rule itself.

Nature is generally harmonious in matters of this kind; and seldom places a short trunk and diminutive head upon long, slim pedestals. And the relative size of the body: its peculiar conformation, and other circumstances, may be told with as much precision and exactness from seeing the teeth alone, as it is possible to infer the same from any other detached portion. The law of relative proportion is such, that these circumstances seem to us indubitable.

The following extract, from a recent scientific work, is so full of interest, and so much to the point under consideration, that I trust I shall be justified in quoting it here. It is as follows:

"In the extensive quarries of gypsum, near Paris, the workmen frequently dug out the bones of unknown animals. In the mind of the uneducated laborer, they excited little attention, and were thrown away.

"The fact, however, coming to the knowledge of Cuvier, he undertook to examine the matter. The result of the examination

astonished himself and the world. He discovered upwards of fifty species of animals not now known on earth. They all belonged to the order which naturalists call the *pachydermata*, or thick skinned, of which the horse, the hog, and the rhinoceros are examples. They were not, however, the horses, hogs, or any thing else now living on the globe.

“Cuvier’s own account of the manner in which he succeeded in reconstructing these strange skeletons, is peculiarly interesting. I found myself (says he) as if placed in an immense charnal-house, surrounded by mutilated fragments of many hundred skeletons, of more than fifty kinds of animals, piled confusedly around me. The task assigned me, was to restore them all to their original position. At the voice of comparative anatomy, every bone and fragment of bone resumed its place. I cannot find words to express the pleasure I experienced in seeing, as I discovered one character, how all the consequences which I had predicted from it, were confirmed. *The feet were found in accordance with the character announced by the teeth; the teeth in harmony with those indicated beforehand by the feet; the bones of the legs and thighs, and every portion of the extremities, were found set together precisely as I had arranged them before my conjectures were verified by the discovery of the parts entire.* In short, each species was, as it were, reconstructed from a *single one* of its component elements.”

Now, if these considerations are entitled to any weight, as tending to throw light upon the uniformity, consistency and harmony of nature’s own works, their pertinency to the subject before us must be seen at once. And something more than mere mechanical skill is required in preparing and adjusting artificial teeth.

If it be true that the size, shape, color and position of the teeth in man, conveys to the mind of the beholder certain distinct impressions as to *character* and *temperament*, then it is easy to be understood how the dentist may *libel a man, and destroy his character completely.*

If he puts in the mouth of a broad-shouldered, thick-necked, chubby, laughing-faced individual, an entire set of long, slender, and delicately transparent, or pearly teeth, he has outraged nature in her own temple, and caricatured his confiding victim.



Such teeth as these do not belong to this variety of the species, any more than the teeth of an insignificant poodle belongs to a mastiff or a brave Newfoundland dog. And the varieties in the former are as remarkable as in the latter case.

Equally unbecoming and improper would it be to substitute large, short yellow teeth in the mouth of a delicate young lady of a nervo-sanguine temperament, blue eyes, clear complexion, and a pulmonary diathesis.

Age, too, has its distinctive marks. Not that we are to examine the mouth of men and women, as they do horses, to learn how old they are; not so. But I contend that the operator should be able to tell, from the numerous physical signs connected with this subject, the relative size, color and form of the teeth associated with the several varieties of temperament, form, figure and age of each individual.

In old age, the complexion changes—becoming more sallow and less transparent. And the same change as to color takes place in the teeth of aged persons.

The diminished force of the heart and arteries; the consequent moderation in the action of the capillary vessels, together with the corrugated or wrinkled condition of the skin in the case of aged persons, all tend to corroborate this statement, and may be regarded as so many signs hung out for our guidance in the pursuit of scientific knowledge.

The antagonism of the teeth is another point demanding our attention. Every one knows the effect upon the physiognomy which that peculiar protrusion of the under-jaw, known as "*jimber jaw*," produces.

The style of the countenance, and the "*tout ensemble*" of the face becomes identified with this malformation, and receives its peculiar physiognomical character from it. And every similar departure from a legitimate and regular arrangement of the features is, in so far, a departure from the true standard of personal beauty.

In the arrangement of an artificial denture, as to the matter of antagonism, much of personal beauty and individual character depend. And I might also add, much of the comfort and real utility of the teeth themselves.

How much annoyance, vexation and weariness people are

sometimes compelled to endure in consequence of a false antagonism of the teeth, may be known by attending to the following circumstances.

In the first place, nature has fixed the precise point of contact between these organs, and has adjusted the muscular movements of the parts accordingly. And it must be obvious that any alteration, involving the change of the leverage of the parts, must subject the muscles to a strain involving weariness and pain. And not only so, but every motion of the parts, either in eating or speaking, must be accommodated to the change.

This necessarily involves a comparative change in the arrangement of the features, and an expression of the countenance, at once unfortunate and unnatural. To adjust these parts in harmony with nature's own plan, so as to preserve the just balance of power, the easy and natural motion of the parts, and the regular and uniform play of the features, is absolutely indispensable to success, and is therefore most desirable.

Moreover, any variation from this point, even though it be but the twelfth or sixteenth part of an inch, necessarily changes the fulcrum, and diminishes the power and ease with which mastication is performed.

I have become satisfied, from observations upon this point, that too little attention has been given to these considerations by the members of our profession. And it has doubtless been observed by you all, in the course of your experience, that the teeth artificially supplied, are sometimes too short and sometimes too long, and thus, in both instances, imparting a false character to the person who wears them. And it is only by attending to some of the suggestions herein made, that a remedy can be supplied. A perfect imitation of nature is the perfection of art.

The very best productions of the greatest masters, in painting and statuary, always have and ever must derive their greatest excellence from the fidelity and skill with which they copy nature. Aside from this, neither painting nor sculpture possess any excellence or are of any value.

And this resemblance, which is so essential in works of this kind, necessarily involve the strictest attention and deepest thought. Circumstances are of consequence to them, which, to men in other professions, are of little account. And the same thing is true of



him who would distinguish himself in the department of dental surgery to which we refer. The form, figure, size, temperament, and complexion, are all to be consulted, and order and harmony restored.

Where malformations and actual deformity exist, real artistic dentistry may do much in changing and bringing back the legitimate form and expression of the face. Indeed, it must be in circumstances like these, that the most noble and splendid achievements are to be sought. And the restive spirit of professional ambition can never be satisfied until the results, so briefly alluded to, and so imperfectly foreshadowed, are fully realized.

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*Experiments on the Electro-galvanic Process for Depositing Plates for Artificial Teeth. Read before the American Society of Dental Surgeons, at their Twelfth Annual Meeting, held in Philadelphia, August 5th, 1851.—By A. HILL, D.D.S.*

GENTLEMEN OF THE AMERICAN SOCIETY :—Agreeable with a request which you were pleased to make at the last annual meeting of this society, I herewith submit to you the results of some of my experiments in electro-plating, or rather in depositing plates for mounting artificial teeth by the electro-type process. Some eight or nine years ago, I conceived the possibility of depositing metallic plates upon plaster, or metallic models of the mouth, for dental purposes.

But being ignorant of the process, I did not attempt a practical solution of the matter at that time. Shortly subsequent, however, I called upon some scientific gentlemen in the city of New York, who I supposed to be well acquainted with the electro-type process, and on inquiry satisfied myself that the thing was not sufficiently developed to warrant a trial. And as from the best sources of information within my reach, there appeared to be no probability of success, the matter was deferred until an opportunity might occur for experiment.

About two years since, I became acquainted with a gentleman who was practically engaged in the electro-plating business, and it occurred to me that here was a chance for experiment. I accordingly laid the whole matter before him, and obtained a favorable opinion as to the success of the undertaking. We imme-

diately commenced our experiments; the results of which I now proceed to detail.

The first thing in order was to prepare my models. This was done in the ordinary way with calcined plaster of Paris, with a small copper wire to serve as a connection with the battery, running diagonally through the model, with the end slightly projecting in the palatine arch. This done, the next thing was to render the plaster model a non-absorbent.

For this purpose, after trying various experiments, I found that a solution of gun-cotton in sulphuric ether, answered the best purpose. Copal, and other varnishes, although answering a tolerable purpose, we found would not stand the strong action of the alkaline solutions when immersed in them. But the gun-cotton solution, commonly known as "Liquid Cuticle," was sufficient for this purpose. After this was spread entirely over the model with a brush, and suffered to become perfectly dry, the next thing was to make a conducting surface. Here, the greatest difficulty presented itself. Plumbago, which is ordinarily used, or rather recommended for such purposes, we found would not answer. Various experiments were resorted to, to accomplish this object.

The following, however, was most successful—after drawing a line with a pencil around such parts of the model as we wished to have covered with the plate, we took a small camel's hair pencil-brush, and laid over a thin coat of sizing, then upon the sizing we would lay on gold or silver foil. This process requires much care, inasmuch as any imperfection or blemish is certain to be copied in the deposition or plate. This was allowed to dry, after which it was ready for the battery.

Instead of the foil thus applied, we sometimes used bronze, which answered a good purpose, especially where copper is to be deposited. Much care and practical experience is requisite to make a firm, solid, and tenacious plate. The power of the battery must be delicately graduated, or the deposit will be rough and coarsely granulated. A gentle movement of the solution is also requisite, in order that the deposit may be uniform and even.

After the plate had acquired sufficient strength and thickness, it was removed from the model, thoroughly cleaned, and then immersed, so as to receive a deposition on both sides. In this



way, a sufficient thickness may soon be obtained. Frequent removal and scouring is necessary to prevent an irregular granulation. In this way I have succeeded in forming several plates, of sufficient thickness and strength, to be worn in the mouth, some of which I had the pleasure to exhibit before this society at its annual meeting. For the sake of economy, my experiments were made with silver and copper. I found that copper could be deposited with the greatest facility of either of the metals upon plaster. I therefore conceived the idea that copper might be used as a basis for the other metals, affording strength while it would likewise lessen the expense. I therefore took an impression of a lady's mouth for an entire set of teeth, made a deposit of copper, as above described, then cleaned the plate and deposited a coat of pure silver over its entire surface, upon this I mounted the teeth, using soft solder to secure them to the plate; after which they were again immersed in the battery, and received another coating of pure silver.

The fit was most perfect, and my patient delighted. By the way, I should mention that this lady was the wife of the gentleman with whom I was experimenting, and, of course, knew the nature of our experiments.\* Here, then, I had high hopes of success. But a circumstance developed itself which soon taught us another lesson. In wearing this plate, a galvanic action took place, which seemed fatal to this peculiar feature of our enterprise.

But I have become well satisfied, by much reflection, that if this process is conducted in a perfect manner, no galvanic action can result; and for this very good and sufficient reason, viz: that where the copper is perfectly covered and protected from fluids by the silver, no such action can take place, as it is essential that the fluids of the mouth act upon both metals in order to produce it. This plate, mounted with teeth,—the first, in all probability, ever worn—has now been used more than a year, although fresh deposits of silver have been, from time to time, made upon it, as I understand. The use of copper (if it can be used in this way,) will overcome and obviate several difficulties:

1st. It can be deposited with greater facility, and, therefore, shortens the time of the process. 2nd. It diminishes the expenses, and—3dly. It can be annealed without danger of warping or blistering. And, finally, if you add a coat of pure gold to the whole piece, I cannot imagine any harm that can come of it.

During the past year circumstances have transpired which rendered it extremely inconvenient for me to pursue these experiments, and I regret exceedingly that I am obliged to report so little progress in this very interesting department.

That plates can be deposited in this way, ensuring a more perfect adaptation to the mouth, while at the same time it relieves the profession of the entire process of swaging, I have already demonstrated. That it can be done with sufficient facility and economy to supercede the old method, remains to be seen. I cannot but regard the experiment as a fine field for instructive and useful study, and worthy the attention of every member of the Dental profession. I am of opinion that models, made of De Cart's, sometimes called Sir Isaac Newton's mineral, or fusible metal, may be used instead of plaster, and thus obviate the difficulties of forming a connecting surface with that material. When models of this metal are used, and a sufficient body of plate deposited, the model or casting may be melted away, leaving the plate unharmed—annealing it at the same time.

I cannot doubt that the time will come, and that too before long, when, in our large cities, the Dentist will have nothing to do towards preparing a plate, but to make his casting and draw around it the line for the borders of his plate, and leave it with the electro-plater.

It would be entirely superfluous and unnecessary for me here to enter upon a labored description of the ultimate advantages of this process, if once rendered practicable. They are so obvious as to suggest themselves to every reflecting member of our profession, and so great as to inspire fresh hopes of advantage in every case.

The metals deposited in this way must necessarily be *pure*. An entire gold plate, therefore, could not be used to advantage, as pure gold is too soft; but pure gold may be deposited upon pure silver of sufficient thickness to answer every purpose, and at the same time be less objectionable than the ordinary rolled plate, now in use, as to any galvanic or corrosive action in the mouth. It should be remembered that all metals, deposited by this process, require annealing, as they come from the battery hard and exceedingly brittle.

In conclusion, gentlemen, allow me to express the hope that



this subject may be taken up by some member of the profession more competent than myself, and prosecuted to a successful termination; and if I can impart any hint or item of information that will contribute to this result, it will give me pleasure so to do.

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For the Dental News Letter.

### PROFESSIONAL EMPIRICISM.

*An Essay read before the American Society of Dental Surgeons, at their Twelfth Annual Meeting, held in Philadelphia, August 5th, 1851.*—By A. C. HAWES, D. D. S.

Connected with almost every kind of honest business with which I am acquainted, are to be found some improper and dishonest practices, which arise, too often, from the minds of money-grasping, vicious men, engaged therein, whose aim is neither the advancement of science or art, nor the elevation of the calling which they have chosen to pursue, but rather the accumulation of the profits arising therefrom, however they may be obtained.

These practices, as applied to distinct occupations, have been called—so long, that “the memory of man runneth not to the contrary”—“the tricks of the trade;” but in these latter days they are more properly defined by the general term, “*Humbug.*”

I have been invited to prepare a short “Essay” upon some subject connected with the “Theory and Practice of Dentistry,” and I trust no member of this Association will be offended that I have, thus early in my effort, arrived at the word “humbug.” I hope I shall be pardoned, but I really do not know any subject more positively connected with the “*practice*” of our profession (and I regret to say, sometimes more profitably,) than this modern word, which contains so much disgraceful meaning. Of the “theory” I do not design so particularly to speak.

It is said to have been a maxim once taught by a dishonest father to his son—“Get *money!* get it *honestly* if you can, but get it;” and we now and then find a member of our dental faculty whom, to judge from his professional conduct, we might safely suppose to be the veritable son, who had taken his father’s maxim as law, and felt bound to abide by it.

We witness these professional impositions in the reprehensible want of candor exhibited towards those who patronize such dentists as I have alluded to, in the inclination to deceive them in

regard to the condition of their teeth, and the nature of the operation, which may so particularly affect their comfort for all coming time;—in the lack of sympathy shown the patient, and the willingness of the operator to forget his comfort, as well as in the absolute recklessness which he manifests for the character of his profession; for, in his eager grasp for the “Almighty Dollar,” he loses sight entirely of the fact that something is due the profession and its character. He seems to forget, in view of this corrupting talisman, that he is dealing with flesh and blood, and that the delicate organs, which he operates upon, contain nerves and blood-vessels, which render them so extremely sensitive as to require all the skill and care which can possibly be bestowed, to prevent the most excruciating pain. He considers the whole operation a mere business transaction, and comforts himself by thinking that there is no money to be made by entertaining sympathy for the suffering patient.

By such practitioners the patients are received with an air of kindness, which is, of course, pleasing to them, and while suffering perhaps under the pain of a raging tooth, or their minds are filled with a fearful anxiety in relation to the amount of suffering they are to endure in the process of the operation, they are prepared to believe any thing which the dentist may tell them, however absurd. And the frank and open, only in his manner, is prepared to tell them any thing which will tend to swell his profits, though the patient suffer under or by the operation ever so much. If a question is asked, the answer of the dentist is such as would be likely to secure the job, his object being, not to tell the truth—not the establishment of a character, not the elevation of his profession, but to “get money.”

If, for instance, a lady, under a mistaken idea of the manner of performing an operation, and ignorant of the technicalities of the profession, ask him if he will insert a single tooth on the “principle of atmospheric pressure,” he readily replies, “Oh, certainly, if you wish it; that is a very common way for *good* dentists to insert single teeth. It is a little more expensive, to be sure; but when you want a single tooth well set, it should always be on the principle of ‘atmospheric pressure.’ There are very few dentists who *can* insert them upon that principle, though *I* have had much practice in that way, and you will find



it better, by all means, when you have teeth inserted, to have them fastened in that manner." When the operation is completed, he informs his fair "patient" that he has added a little more expense, by fastening a couple of clasps upon each end of the plate, just to steady the tooth. It then being *secured* in the lady's mouth, he takes his pay for the single tooth, the "atmospheric pressure" and the "four clasps," with a manner of exceeding honesty, and, as a parting favor, he gives her the gratuitous information that when the *air* is exhausted, she will perceive that the tooth adheres to the gum most delightfully; and adds, as a parting word—"but, Madam, if any thing should happen to *that* tooth, be sure and consult *me*." The lady retires, well pleased that she has been through the "atmospheric pressure" operation, with four springs on the plate, with so little pain; and she is delighted with the seeming candor, urbanity and honest bearing of the operator, and is well satisfied to have paid the triple price of his impositions—and the man smiles at his own impudence.

It is true that such a man cannot long impose on the same person in this, more than any other, calling in life; for the time comes when the patient learns that there is more "suction" in the "atmospheric pressure" principle of such a dentist than is at first bargained for; and he is, in short, one of those whom Shakspeare has described as "one who will steal into a man's favor, and for a week escape a great deal of discovery, but when you find him out, you have him ever after."

Dr. Berry, of Newport, once informed me that a lady one day called on him, who had had a tooth inserted on the root of another, and desired him to insert a second in the same manner, asserting it had been in for nearly a year, and that she had never had the slightest trouble with it, for the reason that it was fastened by suction. The Dr. examined the tooth (perhaps more minutely than prudence would have dictated,) for the purpose of ascertaining the *modus operandi* of his professional predecessor, but while prying into (what for aught he knew was) the air chamber, the tooth came out, when, lo! the discovery was made that the suction lay in a large *iron* pivot, which had become nearly rusted off.

Such practices as these, I have reason to think, are resorted to by many who have adopted our profession; but such a course, I

know, must be condemned by the great body of our dentists. Those who are really skilful have no need to resort to deceptions like these, and those who are unskilful will much sooner arrive at a respectable standing among their brethren by seeking to improve. If the gain of gold is the only object for malpractice, with these wicked cheats, there is nothing which will so surely keep one from the goal of his desires. It certainly cannot be wrong to deal honestly; and it is something more than dishonest—it savors much of cruelty—to deceive those who not only confide in our word, and who, suffering with agony, in all confidence place themselves in our hands, to endure a still greater amount of real or imaginary torture. When or where do we see more intense agony than we observe depicted in the countenance of a timid person when about to submit to some dental operation, however simple; when anticipated pain, like an electric shock, seems to dart through every fibre of the delicate frame, and “cold, fearful drops” stand on the trembling flesh? I have seen patients laboring under such a weight of painful excitement, when only awaiting the extraction of a tooth, that if, instead of a tooth, life itself were about to be parted with, they scarce could suffer more. And surely this is no time for deception—this is not the occasion on which to practice the “tricks of a trade.” This is the moment in which the dentist is looked to with the utmost confidence, and this is when he is called upon to exhibit not only truthfulness but sympathy, to speak a word of encouragement, to allay the (perhaps needless, yet still) oppressive fears. And, to my mind, it is as much a part of the duty of a dentist to prepare the *mind* of a patient for an operation, as it is to perform that operation in a faithful manner.

The dental art is but in its infancy. Each succeeding year brings to light new discoveries and important improvements; and the experience of every day shows us that the business of the skilful dentist is more and more appreciated. Then away with all deceptions, all tricks, all “humbugs.” Let industry and honest emulation among our members be the means to excellence; let our aim be not so much to get rich, as to raise a standard of honorable character for our profession, and for ourselves. Industry, integrity, and an aim at perfection in our art, will bring to us wealth and character, the praise of men and the approving smile of heaven.



*The Proceedings of the Twelfth Annual Meeting of the American Society of Dental Surgeons, held in Philadelphia, on the 5th, 6th, and 7th of August, 1851.*

Reported expressly for the Dental News Letter, by Prof. E. WEBSTER, Stenographer.

TUESDAY MORNING, AUGUST 5, 1851.

The association convened at Sansom Street Hall, at nine o'clock, and was called to order by the President, Dr. E. Parmly.

On motion of Dr. E. Townsend, the dentists of Philadelphia were invited to attend the sittings of the society.

Reports from the several officers were read, and other private business transacted.

Committee on Aphorisms reported their readiness to bring the result of their labors before the association.

A committee was appointed to take into consideration the propriety of altering the constitution, with power to alter or amend the same, and report. Committee—Drs. Townsend, Foster, and Arthur.

A committee was appointed to confer with the Treasurer, and report such names of members who had forfeited their membership, agreeable to the constitution, by the non-payment of annual dues.

At the request of a member, his name was stricken from the roll.

The Secretary was instructed to prepare a notice, for publication in the newspapers, inviting the public to be present at the meeting on Wednesday, at 4½ o'clock, P. M., to hear addresses from members of the association.

Dr. Dunning now read his aphorisms on the treatment of exposed dental nerves. Adjourned till four o'clock, P. M.

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AFTERNOON SESSION.

On motion, Dr. A. C. Hawes read his aphorism on the preservation of the teeth. Dr. A. Hill read a paper on obtaining plates by the electro-type process.\* Dr. John Allen gave the history of his experience in the same field of experiment; also, on the subject of uniting single teeth to metallic plates by fusing a mineral attachment; specimens of which were exhibited, for which the society returned their thanks.

Committee on Membership reported, advising that all members

\* This will be found in another page.

in arrears for three years, and who, after notification, still neglect to make payment, be stricken from the roll ; which was approved by the meeting.

After some business of a strictly private nature, in reference to membership and character, on which a committee was appointed, the association adjourned till Wednesday morning.

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WEDNESDAY, NINE O'CLOCK, A. M.

Committee on character reported, which was laid on the table.

Dr. A. Hill, by appointment, then read an essay on artistic dentistry,\* for which the thanks of the society were returned him, and a copy asked for publication.

Dr. A. C. Hawes followed by an Essay on Professional Empiricism, for which the thanks of the Association was tendered him, and a copy asked for publication.

PRESIDENT.—The remaining portion of our time will be occupied with discussions, and the first thing before us is a paper read by Dr. Dunning yesterday.†

Dr. DUNNING.—I will state for the information of gentlemen not present yesterday that there are a few short remarks intended to give the views of the Society when they have been digested by it, upon the subject of treating *exposed nerves*.

Dr. ARTHUR.—In regard to the first *Aphorism* there is known to be a difference of opinion in the profession, and I think it would be satisfactory to endeavor to ascertain what is the state of opinion in the Society with regard to it. I propose therefore that members state their opinions on this subject.

Dr. WESTCOTT.—I would like to ask whether one class of cases which are not mentioned here, was neglected intentionally or through oversight. I refer to cases where the nerve is in a state of absolute decomposition, the tooth containing only a semi-fluid substance.

Dr. DUNNING.—I merely speak of cases where the nerve is exposed, and where the destruction of the nerve is a part of the operation.

\* This Essay will be found in our columns, and we would ask for it a careful perusal.

† The Aphorisms offered by Dr. Dunning, were not furnished to the reporter, but the substance of the two first, and most important, are as follows: "A tooth whose nerve is exposed, may be permanently saved by entirely removing the pulp and filling the place occupied by it with gold."



Dr. ARTHUR.—I would state that for a number of years I have been satisfied of the utility of this operation, and have practised it frequently without hesitation. When a person presents himself with the pulp of a tooth exposed and in a healthy condition, I am so confident of success that I hardly think it necessary to state to him that there is more than a remote possibility of failure.

Dr. WHITE.—Is it meant by “permanently saved” that the tooth will be retained in the mouth as well as any other tooth?

Dr. ARTHUR.—I am not prepared to say. By permanently saved I mean that the tooth so treated will remain in a healthy condition for a great many years, an indefinite time.

Dr. DUNNING.—None of us would be able to testify to the satisfaction of this meeting on that subject, but my feeling when I am called upon to treat such cases is entirely similar to that of Dr. Arthur's. I have treated such cases for ten years, and I was lead to treat them in that way by Dr. Maynard of Washington, and he, so far as I am concerned, was the originator of it. For many of the first years of my practice it was always a matter of doubt and uncertainty, and I did it with a great deal of hesitation, which I always took great care to express to the patient, that he might be made to go halves with me in the risk, and might feel, if there should be a failure, that he had not been deceived. But for some four, five or six years past I have lost a great deal of the feeling on the subject, and when the nerve is exposed, I have the same certainty as to the degree of success that I can attain in a given case, as I have in any ordinary operation; as, for instance, plugging a tooth; and I can say, and those who have been acquainted with my practice can bear me out, that I have failed in as few cases in this operation as the profession generally fail in any operation connected with the art. With regard to the permanency of it I have not as yet fully tested it, various accidents have befallen such teeth; sometimes there will be, in the course of four or five years, the formation of an abscess which may have arisen from accidental causes, but there are many cases which I can call to mind, in which teeth have been treated in this way, and have continued four, five and six years without any abscess or ulceration, and where no discharge has taken place whatever.

Dr. WHITE.—I only want to push my inquiries a little further.

It seems to me the first proposition is the most important one, for it settles the point that it is proper and right to destroy the nerve. I am as willing to destroy the nerve as any one, yet this Aphorism would seem to imply, that that was the *only* method of saving the tooth. I have seen teeth treated as well where the nerve was not destroyed, as where it was; I have seen a case where a tooth was plugged twenty-five years over the nerve. I would like to have it more clearly established what is meant by this Aphorism, whether it means that the destruction of the nerve is the only treatment; or is it probable that we can frequently succeed without it.

Dr. J. ALLEN.—With reference to capping nerves, my experience does not tally with that of Dr. White, to the extent that he has mentioned. I have not been very successful in that course of treatment. I usually destroy the lining membrane of the tooth, by a fine, small, elastic instrument, so that I can cut it out at once. I prefer removing as large a portion of the lining membrane as possible. If there is only one fang, I can, generally, treat it successfully; if there are two, I have found more uncertainty in the operation; it is more difficult to cut out the lining membrane. If I find a tooth where the nerve is just exposed, I can treat it with success and confidence. The question arises, whether we can regard that as a permanent operation. I think in many cases we shall find that, after a few years, (frequently it will stand ten or fourteen years,) then an abscess will be formed, the fang is diseased and loosened. Can we regard that as permanent? So with regard to a plug put in a tooth, can we regard it as a permanent preservation of the tooth? I am under the impression that we cannot, though, in a majority of cases, where the nerve is just exposed, I believe such a tooth can be rendered useful for a number of years.

PRESIDENT.—I would remark, in reference to this aphorism, which reads thus: "A tooth, the nerve of which is exposed, may be permanently saved,"—that the question now comes up, what does this mean—whether it is five, ten, or fifty years? A tooth may be successfully saved we know, and for many years; for I have seen many instances in which the success has been most complete, but whether it will last as long as life will last, the experience of none of us can establish. It is not many years



since, in the practice of dental surgery, that it was thought, when the nerve was exposed that the tooth was lost; but now, in our improved state of knowledge, we find that when a nerve is exposed, a tooth may be successfully, and, as far as our experience goes, can be permanently saved. The points we have now to consider are: what has been the experience in relation to the success of those who have practised it for the longest period of time, and what has been the success in the greatest number of operations.

Dr. FOSTER.—As far as my experience is concerned, I can only say, in regard to the exposure of nerves, that it has been my custom, where inflammation has been produced, never to attempt it under those circumstances. But where the nerve is exposed, or nearly so, but not sufficient to produce pain in the tooth, I have employed a cap to great advantage in a majority of cases. In cases where I have employed the probe, or other small cutting instrument, for the entire removal of the pulp, I have generally been successful; but where I have employed arsenic or cobalt, I have always felt extreme doubt as to the successful termination of that operation; but where I could use the instrument, I do not think a single case has come under my observation where suppuration has ensued, though there has sometimes been a slight inflammation. One of my instructors, Dr. Harwood, of Boston, not having read what was published on the excision of the nerve, previous to his return to the profession, made a publication, or a publication was made, of a discovery supposed to have been made by him on that subject, through which it has been his fortune, whether good or bad I will not say, to perform that operation probably more than any other man in the community for the last two years. I think he told me more than a hundred times in the latter part of the last year, and this year, I think, about seventy times. That is pretty extensive practice for that kind of operation. He said he had been successful, I think, with but two or three exceptions. Inflammation had not ensued, suppuration had not ensued, and he was still continuing to receive a great many of these cases. As far as my experience goes, in respect to the preservation of the teeth, under these circumstances, I can only say, that I believe that where that operation is thoroughly and well performed, the tooth

is as likely to last as any living tooth, filled under ordinary circumstances. I think the chance of failure is less than with many living teeth, where the operator is obliged to take so much pains in the operation; and in all cases I would recommend excision in preference to the other.

Dr. CONE.—The question arises, whether the teeth of patients, under all circumstances of age and pathological conditions, should be equally treated, and if so, will there be equal success? Is there not a difference? Is a tooth in a young patient treated with the same degree of success and permanency, as in a patient of middle age? Has the previous condition of the health of the tooth any thing to do with the permanency or success of the operation? Also, has the relative condition of the tooth with its neighbors any thing to do with it? These thoughts I throw out to get the opinion of the members present.

Dr. WESTCOTT.—Mr. Chairman, I must say I am glad this particular subject has been selected for our discussion this morning; not merely from its importance, but from the fact that there has been a great deal of discordant testimony upon it by different and by the same individuals. I happen to be one of these same men. It is well known to many of you, that this is a subject upon which I had formerly written somewhat. Since then my views have been somewhat modified; and these convictions have arisen, not merely from greater experience on my part, but more from the enlightened experience of my friends, to whom I am much indebted for such information, Dr. Maynard particularly. Yet, with all that I have been enabled to gather, both from the experience of others and my own, I confess that I look upon the operation of destroying nerves with arsenic, not with that same degree of certainty that Dr. Dunning has expressed. The plan I then proposed was the excision, which has been talked of as a substitute; and I now say, that, if we could but lay aside the painfulness of the operation, I prefer it by far to any other method of destroying the nerve. I think that if a live nerve is cut off at its upper end, the remaining portion has the power of taking care of itself. I do occasionally, and quite frequently—seemingly from being absolutely compelled to do so—employ arsenic or cobalt to destroy the nerve, but I confess never with the same success as by the other method. I wish to make a



general remark upon the subject, with reference to the first two aphorisms. It occurs to me that they might be put into one, and could cover all that we are authorized to cover. We can do little but give our respective practices. For me to say that nerves should never be destroyed, would not be right; and for another to say they should, I can hardly agree to. The truth is, that every man's practice is thoroughly modified by the circumstances peculiar to his own practice, though done upon general principles, that I have long since ceased to condemn processes. Give me the result; let the result come out right, and I will accord to every man his own process. For instance, Dr. Dunning's practice is made up of the first class of patients in New York—persons, without exception, that take the utmost care of their teeth. He probably does not perform an operation on a single individual who does not care for his teeth with the utmost scrupulousness. This cannot be so in a country practice. I practice in a small city, but my practice, in the one-half, is made up of persons in the surrounding country. For me to take the position that I would not operate on any one who did not take such care of his teeth as I should dictate, would be to cut off one-half of my practice, though in some extreme cases I have done it. My practice is very much modified by this circumstance—different from what Dr. Dunning's practice would be. I then feel that about all we can do upon this occasion is for each to give his own practice, and the reasons for it; and I would be glad if the aphorism should be so worded as to admit of the question being an open one hereafter. Nevertheless, opinions and practices might be so given as to serve as a strong guide to the young practitioner.

One of these aphorisms reads that a tooth may be permanently saved when the nerve is exposed, and another that the vitality of the pulp must be destroyed. We could make them read in this way: A tooth, whose nerve is exposed, may be successfully saved. And if these aphorisms are intended to bear particularly upon the destruction of the pulp, it may read simply—"successfully saved by the destruction of the pulp."

In respect to Dr. Foster's testimony, I don't remember precisely when Dr. Dunning and myself commenced this. It must be eight or nine years ago. We treated mutually and jointly,

all our cases, being in the same office. We treated with the probe, and I must say that, so far as my experience has gone since that period—and it is proper here to observe that Dr. Dunning and myself diverge—I have found the use of the probe not merely practicable, and practicable upon timid patients, but I have to say, so far as ultimate results are concerned, it was far more certain of warding off future inflammation. My practice has been to remove the nerve and at once to plug the tooth with gold with a delicate instrument, which shall go as far as possible to the point where the nerve has been excised; and when I do this in my own way, I have very little fear of inflammation supervening in a healthy mouth that is taken care of. But I do resort—seemingly from necessity, and that necessity based upon the feelings of the patient—to the use of arsenic, in some way or other, to destroy the nerve, and frequently with tolerable success—it being true that the result of these operations depends much on extrinsic circumstances, which the dentist cannot control.

In regard to capping nerves, I confess I never had any success in it. This may be humiliating—it may be tantamount to saying that I do not know how to do it; but I have tried it, and have not been successful. It is something that is important in the extreme, and I shall be most thankful to any gentleman who will so place it before my mind that I may be successful hereafter on the capping system—that is, leaving the nerve entire.

I close by observing that if these first two aphorisms could be so shaped as to include the fact that a tooth might be successfully treated, for I should not be safe in using the word permanently, as it might give a false impression to the public,—I think the word permanently should be supplied by the word successfully, and then so shape them as not to convey the idea that this is the only way in which exposed nerves may be treated, leaving the other an open question—leaving us to accumulate all the light we can. If we can save nerves,—I think they were made for a good purpose,—let us do it. In Combe's Constitution there is an illustration which shows the necessity of having nerves, and I think they are a very good accompaniment to the human system; and if we can save them in their normal condition, I feel that it is an important thing. I rose in reference to these two aphorisms, and I wish that they may be so shaped that they need not neces-



sarily carry the idea that this is the only method of accomplishing the end.

Dr. DUNNING.—In regard to the aphorisms, I would remark, that I consider them entirely the property of the society, and that they have been written in such haste that, on the contrary from feeling any pride in the construction of them, I feel a desire that the society should remodel them entirely, for I see many points, myself, that need it; and I hope that members will not feel the slightest hesitation in proposing any change that is required. In two places in Dr. Westcott's remarks, he refers to the nature of the practice of different individuals, as affecting the operation; but, with regard to my own practice, I wish to say that it is not among those whom I regularly attend, and who take the best care of their teeth, that I am called upon to perform this operation. It is often the case that I am obliged to remove decayed teeth and roots, that I think should be taken from the mouth, to bring it into a proper state. I think I have not, in the aphorism, properly illustrated my own views. I prefer, myself, the surgical operation, whenever it can be used. I have universally practiced it in the incisors and very commonly in bicuspidés, and sometimes in the molars. With regard to the capping system, I have not practiced it, because I dare not. I have no doubt, from the testimony I have received, that it is successfully performed; and I think it is the highest success of the art. But I have seen many cases where the operation has been performed, and the nerve has evidently died, perhaps without even the patient's being aware of it, and the tooth has been left in a position in which it is very difficult to save it comfortably to the patient; and for this reason I have been afraid to do it.

Dr. BRIDGES.—I was very much pleased to hear some of Dr. Westcott's remarks, because it gave me an opportunity of saying a word. About nine years ago this arsenic question came up, and my friend Dr. Westcott said, in my hearing, he considered it a matter of humbuggery, and the man a humbug who used arsenic for killing the nerve of the tooth. He said he considered it malpractice. Since that time I have taken another view of the subject, and yet I have frequently used arsenic, and sometimes a red hot iron, with great success. After the condemnation of arsenic by most of the prominent members of the society, I had

a conversation with Dr. Hill, and he and I concluded that mere cologne or alcohol applied to the nerve, for an hour or two, would so paralyse it that we could fill the tooth; and I practiced that in ten cases out of twelve. In applying the hot iron, I found that if it cooled any it produced inflammation, but if it was red hot I most invariably met with success. I do not recommend this practice; but the other way of applying alcohol or cologne I have had very good success in. I should like to know if others, who have applied the same remedy, have been successful. I was very much delighted that Dr. Westcott gave me an opportunity of explaining this thing, for I felt much hurt at the time, and since then I find that he has changed his views on the subject of arsenic. And I heard you say once, Mr. President, that you would put down the man who used arsenic with the man who used amalgam.

I think in some cases arsenic can be used with great success—where the pain is very acute and the nerve has been exposed for a long time. It is a very painful operation to excise the nerve, and in that case I would recommend an application of cotton, and afterwards moisten it with kreosote, and then put soft wax over it and let it remain from four hours to a day, and the nerve may bleed whenever you touch it, but the feeling is so far gone that you can do it with little pain. Dr. Westcott said that when he excised the nerve, there was very little danger of inflammation supervening in the remaining part. I would wish to know what is meant by the remaining part.

Dr. WESTCOTT.—I mean that the nerve stops some where and connects with the main branch, and if not cut off at the root of the tooth, it is as near that as possible, though not to it.

Dr. BRIDGES.—I would like to hear what Dr. Hill has to say about the application of cologne and alcohol.

Dr. HILL.—I had forgotten the circumstances till they were mentioned, but I now remember them. Many years ago, before this subject was discussed among dentists, and when I was, like most other gentlemen practicing the profession, in the dark in this matter,—left to follow my own judgment as best I might with the light I could gather,—I had, like the rest of them, no definite idea of the mode of practice, and no distinct and certain knowledge as to the results that might follow an operation of this kind.



I remember that, years ago, in a case of that kind, I would uncap the nerve so that it would bleed—I would excavate all around the nerve as well as I could, and leave the nerve as slightly touched as the nerve would allow; and very often I would find it bleeding, and I would take a small instrument and make it bleed, and if there was sensibility, the most convenient thing I could use was a little cologne or alcohol, and sometimes I have used tinct. of myrrh—and after wiping the cavity dry, put in my filling. In treating them in that way, a large proportion have been successful, and have been saved for a number of years; but I have noticed in some cases that suppuration has taken place. I early imbibed a dislike to the practice of using arsenic. When the subject was first presented to me, it struck me unfavorably. I did not doubt that in some cases it would successfully destroy the nerve, so that the tooth might be filled, but it seemed to me to be a dangerous practice, and I have used it in but very few instances. My ordinary treatment is that described by Dr. Foster. My preference is for that mode, decidedly. I have no doubt in my own mind that, in many cases, the nerve may be capped successfully. My own experience has demonstrated it to me; for though I did not operate upon that principle, yet I made the nerve bleed and let it contract, and then I could save the tooth—and it was virtually done by capping, though capping was little known then. In most cases, however, I destroy the nerve in the manner described by Dr. Westcott.

The PRESIDENT.—An explanation is necessary of the remark made by me, which has been alluded to by Dr. Bridges. I have as strong an objection to the use of arsenic to-day, in the way it was used then, as I had on the day the remark was made. I opposed it strongly, as it was used to destroy the sensibility of the tooth, leaving the nerve in a paralysed condition; and it generally resulted in suppuration and loss of the tooth. But it is used now to paralyse the nerve, so that it may be successfully removed afterwards. It is thus, I presume, that all who are successful in their operations, use arsenic. But to place a pill of arsenic in the tooth, destroying its sensibility for a time, and then filling immediately upon that mass of impurity and cause of disease, is a thing which I objected to then and object to now;—but having

had the manner explained to me by Dr. Maynard, I have had success in using it in that way. But we all agree that excision is decidedly the most successful method, and that arsenic should never be used, unless the whole portion, so destroyed, is removed afterwards, and the cavity of the tooth completely filled. I wished to make this explanation, that there might not be an erroneous impression abroad.

Dr. WESTCOTT.—I would like to make a similar explanation. I think there must have been some mistake in regard to the general sweeping assertion that Dr. Bridges said I made. It is true that, as I then looked upon it, it was, to say the least of it, generally in quacks' hands. I think, if Dr. Bridges will recall the circumstances, he will modify it. My temperament, I know, is rather an ardent one, but I have no remembrance of ever saying that a man could not possibly use a certain thing without being a quack. That is going a good ways. But I am ready to say that the head and front of all the quackery that comes to my knowledge is from the use of arsenic. I look upon it as detestable under all circumstances where the object is merely to destroy the sensibility of the tooth; but the precautions and means are so much better understood now than when the remark was made, that I think it is comparatively safe.

Dr. ARTHUR.—I desire that a remark of the President may be so modified as not to leave the impression that he was giving the views of the society. He said, "we all agree that excision," without the previous use of any substance to destroy the vitality of the pulp, "is the most successful method."

The PRESIDENT.—I did not mean to convey the idea that we, as a society, but that Dr. Dunning and myself thought so.

Dr. J. PARMLY.—Every one here will admit that there is a good and a bad way of doing things. The arsenic may be applied so as to do great good, and it may be applied so as to do great harm. I have seen cases where the nerve was in a highly inflamed state at the time, and then a pill of arsenic was put in and a piece of cotton put over it; and perhaps after a few days this would be removed and a dry piece put in, and then the tooth would be filled with gold or amalgam over that cotton, leaving a mass of impurity in the cavity which would, in six months, turn the tooth to a dark color, and it was evidently dead. Who will



not perceive the difference between that kind of practice and simply putting in for a few days this application of arsenic, and then removing it and all the soft part and filling it with gold? That has been my experience and observation in the use of arsenic—that there was a good and a bad way of using it;—one is decidedly bad and the other is not so objectionable. I don't think there is so much in the tooth as in the dentist. In regard to the first aphorism, I understand that in a certain state of the tooth, where the nerve is slightly exposed, it is better to treat it in that way. I do not understand that it is better to drill into every nerve and take it out, when the nerve is in a healthy state. I do not see how any one can understand it so. All I can say upon this subject comes from observation and not from practice, for I practice but very little in that way; but I have had a chance of seeing cases where Dr. Dunning has performed this operation—has taken out the nerve, and in fifteen minutes had the gold put into the fang of the tooth; and I have been more surprised to know how he got the nerve out of both fangs, than to know how a squirrel gets the meat out of both sides of the hickory nut by making a hole in but one side. You could not perceive, afterwards, the least possible disease or discoloration about the teeth or gums. I have seen many such instances; and the cases that he has treated by taking out the nerve directly, have been, invariably, the most successful. I have never seen the same success in cases where he has applied the arsenic and afterward filled the tooth. Six or seven years ago, I should have said that it was a very hazardous operation to take the nerve right out and put the gold in; but from seeing it done so often, I should now say it is the most successful way, and I would have a tooth of mine treated in that way. I have a tooth in my own mouth that was treated by Dr. Foster, twelve years ago. He came very near the nerve, and I told him if he came to it to pick it out, or to take the tooth out. He came so near it that it could be, absolutely, seen. He put over it a cap, and filled it with gold. I had the filling in my tooth for over ten years. And you will recollect, Mr. Chairman, that I was very anxious to have the tooth extracted, as I was under the impression that the nerve was dying. But I was persuaded to leave it; and I think about two years ago the filling broke out. At the time I did not feel any unpleasant sensation or

taste, as I expected there would be when the cap gave way. On returning to New York, Dr. Dunning examined the tooth, and found that there was a perfect formation of the bone. He filled the tooth without touching the nerve and without giving me any pain, and I still have the tooth. The nerve was living at the time. This is all I have to state upon this subject. I rose merely for the purpose of saying that I thought the aphorisms would be generally understood.

DR. WHITE.—*Mr. President*, I would wish to say a few words in defence of arsenic, though not as used, to overcome the necessity of excising the nerve, for that I believe is the object of all. I have not the least doubt that every gentleman who has removed the pulp of a tooth at all, has had much more success by so doing, than if he had destroyed its *vitality* by any agent, and left it remain in the tooth. But it is desirable to get the nerve out with the least possible pain ; therefore, the question arises, is there any thing that will take away its sensibility, but will not injure the tooth after the pulp is out. If the tooth in other respects is not injured, the next question is, can arsenic be applied in any form with safety to the future health of the tooth ? I answer that I believe it can—and that conclusion is drawn from the experience of the use of arsenic for thirteen years with an earnest desire to arrive at the truth. In a series of papers by me on the subject, but which, perhaps, have not been seen by those present, there were reasons given why the pulp of the tooth should have its vitality destroyed previous to its excision ; but I stated that I preferred the actual cautery, where it could be properly applied—but it could not be applied successfully in many teeth. One reason that I preferred in some cases Arsenious Acid for the destruction of the nerve, was, that it made a more deep and deadly slough than any agent I know of. By the use of it, the pulp can be taken out and produce less pain in the operation, than by the use of any other substance. If you apply enough to destroy the vitality, two-thirds of the way down to the apex of the root, you do not injure the external membranes any more at the apex than by the ordinary cautery. The only question is, does it act laterally so as to produce irritation of the external membranes. I answer that it does not. The bony structure does not take up the arsenious preparation as rapidly as the nerve does ; and if it is in a proper condi-



tion to be absorbed, it will destroy the vitality of the pulp in a very short time—say in twelve hours—in twenty-four hours at the farthest—and in that time if it is not sufficient to destroy the pulp, how can it injure the bony structure. The whole object is to destroy the vitality of the pulp, and if it will destroy it in six hours, it should then be removed ; but repeated experience proves that it must be left in a longer time. If a small portion has permeated the bony structure and caused periosteal inflammation, it is as likely to subside as though it had been caused by any other substance. We see cases where the gums and cheek are swollen to an enormous size, and yet it subsides, and the tooth, if plugged, will remain comfortable for years. Another reason I gave was, that if it could be performed without pain to the patient, it did not render them timid, or prevent them from having a nerve destroyed again, as it saves him all the pain that is possible. In hundreds of cases where the operator has attempted to take the nerve out, and the patient knowing it, would never go to the office again. Many persons have said to me, “I would never go to such a dentist, because he tortured such an one so much. Now, arsenious acid is a means of preventing this pain, and there is no danger where sufficient arsenious acid does not remain in the tooth to destroy the vitality of the periosteal membrane. The whole fault as spoken of, has resulted more from ignorance. Operators have been induced to believe that they could put in any quantity, and let it be in as long as they pleased. But it is not so. It is asserted in the United States Dispensatory that the more rapidly an arsenious paste unites with, and a sloughing of the parts produced, the less extensively is it absorbed.

It has been the habit to apply arsenic dry—what is there that you can apply that is less soluble than dry arsenic? Arsenious acid should be ground with creosote until it is impalpable, and as it is largely soluble in that substance, it is in the best possible condition to unite speedily with the pulp. If the vitality of the pulp is destroyed as far as two-thirds of the way down to the apex of the root, it can be removed better, than if the vitality had not been obtunded—and I rarely think of any other method than by applying the acid and letting it remain for twelve or twenty-four hours. It should be observed that the more porous the condition of the tooth, the less time the acid should be left in,

though it will permeate the pulp of one tooth as well as of another. I do not apply arsenious acid down the root of the tooth, lest it should injure the external membrane.

The only question is, can arsenic be put in a tooth without necessarily involving its utter destruction? I say it can. On the second of July I applied arsenious paste to a cavity which opened to the pulp on the posterior part of an incisor of a boy of nine years of age. On the fourth, I filled that tooth in the root two-thirds of its depth at least, and it presents as much vital appearance now, as its neighbor—and I have treated cases in that way long ago, which now present the same appearance. In '42 and '43, I prepared a thesis for the degree of Doctor of Medicine, on this subject; and I gave a list of one hundred cases which I had watched for two years, and in eighty-four of the cases, there was no pain in destroying the pulp of the tooth. I found it to vary with the temperament of the patient.

My experience is, that where the nerve has been inflamed, it will be the least likely to give pain when the paste is applied. If the operation is performed in the evening, it will be more likely to give pain, but if performed in the cool of the morning, it will not be likely to give pain in one case out of twenty, I will guarantee—but if it is in the evening, it will give pain in nine cases out of ten. A recently exposed nerve gives more pain than one that has been frequently inflamed.

I have no objection to the use of the cautery—I have no preference for arsenic, except that it is the most deadly poison I can lay my hands on;—if you can give me something that will do it faster—I will take one share in that stock. The great object is to manipulate without giving pain, and I find that I give less pain by using the arsenious acid. As to filling the tooth as soon as the pulp is taken away, I do not do it—but I wait to see how far I have destroyed the vitality of the pulp. Nature, besides, is better calculated to excise the pulp at the point where it is most necessary, than any instrument we can apply. If we fill a tooth that has been bleeding but a few minutes, the anastomosing *blood vessels* do not at once take back all the blood that returned previously through the pulp, and that function cannot be established without engorging the blood-vessels around the root of that tooth; and it is better to wait till that condition of the blood-vessels has



passed off, before filling the tooth; and then you have a better opportunity of saving the tooth, when all the foreign matter is removed, such as the fragments of dead pulp and blood clot. I have had cases where it was filled immediately, and the patient has returned the next day with so great congestion that the tooth had to be extracted at once. I contend that the necessity of waiting till the anastomosing circulation is established, is one of the most important points in the treatment of the teeth, and there is a greater degree of certainty in waiting a few days than in filling the tooth immediately.

The principal point for which I rose, was to give my evidence that I could destroy the vitality of the pulp with less pain by using arsenic than by any other means, and without endangering the health of the tooth.

DR. WESTCOTT.—I would like to ask a question or two of Dr. White for information. Do I understand you to say that you are not particular about destroying the nerve to the apex of the tooth?

DR. WHITE.—No, I am not.

DR. WESTCOTT.—Did you say that it was the absorption of the arsenic that destroyed it?

DR. WHITE.—I have said it was the absorption.

DR. WESTCOTT.—If it is the absorption, and has a progression upwards, what guarantee have you that it is not carried through the apex?

DR. WHITE.—I have none.

DR. WESTCOTT.—What guarantee have you that it will stop at any given point, and if it goes through, is there not a possibility of its producing mischief?

DR. WHITE.—It will produce mischief if it goes through—but I never destroy the pulp entirely—I do not pass the arsenic low down in the root, for fear of its going through. I use other substances to get rid of the balance of the pulp.

DR. WESTCOTT.—Supposing you have destroyed the pulp two-thirds of the way to its apex, and you decide to fill the tooth, have you any special means or rule by which you stop your filling at a certain point, so as not to crowd upon the portion of nerve still remaining?

DR. WHITE.—When I am using a small probe to remove the pulp, I pass it as low down as I can—it being large enough to be

handled—I cannot get quite to the apex, except in one or two classes of the teeth—and I think, that getting to the apex is rather more of a beau ideal of what treatment ought to be. I never travelled to the apex, without it is a very large root. I said two-thirds, because I know I never can get to the apex of the root—it is as fine as a hair for a third of its length.

DR. WESTCOTT.—The point is, what means have you of knowing whether the arsenic has not been carried clear through to the apex, and there made it liable to inflammation?

DR. WHITE.—I would answer that I have none, except the inflamed state of the root of the tooth, and I think if it does, the part can as well recover from that corrosive agent as from any other. But I do not mean to say that inflammation invariably ensues—I deny that it is always carried through, and the only symptoms I have that it is not, is that it don't cause inflammation afterwards. I would state that I was enabled to follow those one hundred cases for two years, in which time I extracted six of the teeth for alveolar abscess—but a great number I am enabled to watch yet, and there has not been any alveolar abscess.

DR. ARTHUR.—I also have been very much interested in this matter for a good many years past. I have always used arsenic in some form for destroying the vitality of the pulp before removing it, and still use it with satisfactory results. On first entering the profession, I applied it as well as I knew how, but with such bad consequences that I ceased to make use of it. I am indebted to Dr. White, for hints which induced me again to turn my attention to its use, and for seven or eight years past have employed it with great satisfaction. My principal object in rising at this time, is to call the attention of the association to a new agent for destroying the vitality of the pulp, or rather an old agent in a new form. For about a year, at the suggestion of a gentleman from Cincinnati, who then stated that it had been used in the west, a long time for this purpose, I have been using the ore of cobalt. This, it is well known, contains about fifty per cent. of pure arsenious acid, which, indeed, is principally procured from this ore. I prefer the arsenic as it exists in cobalt, for the purpose of destroying the vitality of the pulp, for the simple reason that its effects in my hands have been more satisfactory. I use the simple pulverized ore, by saturating a small piece of cot-



ton with creosote, and taking upon it about the twentieth part of a grain. I never apply it except I am satisfied that the pulp is fully exposed. I generally make two applications, which in most cases, I find quite sufficient for the purpose. If I am satisfied that the case coming into my hand, requires the extirpation of the pulp, I apply the cobalt without subjecting the patient to the pain of removing the decayed bone from the cavity. I cover it with cotton saturated in an alcoholic solution of gum sandrach, which, with very light pressure—a very important matter—can be made to retain its place. This I allow to remain twenty-four hours. On removing it, I am able very fully to expose the pulp. I then apply the cobalt directly to the surface of the pulp, secure it as above directed, and allow it to remain at least a week. At the end of this time it will generally be feasible to remove the pulp to the very extremity of the root, with but slight pain to the patient. Before adopting this practice, to which I was a long time coming, under the influence of the great dread of the effects of arsenic upon the peridental membrane with which I was infected, I had a great deal of trouble in these cases where patients would not bear firmly the pain attending the removal of the remains of the pulp from the fang. I found it easy enough to destroy the vitality of the pulp to the opening of the fang, and a little way up, but then in consequence of the difficulty of bringing any thing into direct contact with the remaining sensitive part, I was generally compelled to remove it without regard to the pain inflicted, which was sometimes exceedingly severe. I was generally in the habit of making several applications of the arsenic, before I used cobalt in this way, and as Dr. Maynard's practice has been alluded to in this connection, I may state that I know that this was also, and I think is now his practice. I have never allowed arsenic to remain so long as the cobalt, and am therefore unable to say whether it could be done with safety. I should hesitate to try it on account of its solubility.

Dr. Westcott has just stated that in any case where arsenic is applied to the sensitive surface of a cavity of decay, it is certain to destroy the vitality of the tooth. This remark has a particular bearing upon a paper published by me in a late number of the "American Journal of Dental Science," in which I contend and endeavor to show that this can be done, with advantage. We all

know, and I know well, that arsenic applied to the bone of a tooth, even when but slightly decayed, and allowed to remain long enough, will effect the destruction of the pulp; but that it will do so in all cases, when allowed to remain only long enough to remove that great tenderness of the bone, which is often found so serious an obstacle to good operations, is not the fact—I know that it is not so.

DR. WESTCOTT.—I will be more explicit on the point—I meant that so far as I have had a chance of observing, these teeth which have been treated with arsenic in the usual way, with the view of destroying the sensibility of the bony structure, I have usually found worked bad.

DR. ARTHUR.—May I ask what is meant by the usual way?

DR. WESTCOTT.—Allowing it to remain twelve, or twenty-four hours, four days, or a week, as has been stated in this discussion.

DR. ARTHUR.—No allusion, as far as I am aware, has been made in this discussion, to the use of arsenic for removing the sensibility of the dentine, but for the entire destruction of the vitality of the pulp, which is quite another matter.

DR. WESTCOTT.—I incidentally stated that in my general experience, I had seen much mischief from the use of arsenic—as it had killed the teeth of several—destroying their sensibility.

DR. ARTHUR.—The same sweeping assertion, that arsenic could not in any case be applied for this purpose, without eventually destroying the vitality of the tooth so treated, has been frequently made, and I think it ought to be met with a hearty denial of its truth.

There is another important point to be considered in connection with this matter of destroying the nerve, and that is the inflammation of the investing membrane of the root, which is very liable to occur, in the course of the operation, whether arsenic is used to destroy the sensibility of the pulp or not. The best means of treating this inflammation, when it presents itself, is a subject of very great importance, as the successful preservation of many teeth depends upon it. It is impossible here to enter fully upon this subject, and I now allude to it merely to call attention to the topical use of chloroform for the purpose. I have found its effects more satisfactory in many cases than any agent known to me. Whether it acts as a sedative or counter-irritant, I am unable to



say. I generally apply it, or direct its application by wetting the finger with chloroform, and touching the gum repeatedly along the course of the root or roots of the tooth under treatment, or saturating a small piece of cotton with it, and laying it against the affected part. Since using chloroform for this purpose, I find that it has been used in France as a topical application in cases of neuralgia with alleged success. About two months ago, a gentleman called upon me to ascertain if I could do any thing to relieve him of pain which he had been suffering for several weeks, with one of his lower molar teeth. He supposed the nerve would have to be destroyed. On examination I found that the nerve was already dead, and that he was suffering from inflammation of the peridental membrane. I advised the application of chloric ether. He called in a few days to say that in five minutes after he applied it, he was relieved of pain, and had since been quite free from it. I then removed the remains of the pulp, filled the roots firmly, and the cavity in the crown, a day or two afterwards. Some weeks after this I saw him again, and there had been no recurrence of the painful symptoms.

DR. BRIDGES.—I would remark that this subject was introduced by me, with no unkindness whatever to Dr. Westcott.

A remark has been made which reminds me of a course of practice pursued by a friend of mine. He has endeavored to preserve the nerve alive by cutting it off above the wounded part, taking out the wounded part, and after medical treatment filling the tooth. He told me that in the last two or three years he had taken out fillings to see the state of the teeth, and that in several cases a deposit of white foam had been found in the nerve cavity, and a beautiful healthy state of the nerve had taken place. If this is a fact, it is worthy of notice; and I believe that if one half of the attention was paid to keeping the nerve alive that is paid to killing it, there would be found some remedy that would save almost every nerve. I recollect when I was a boy, in going across the mountains of Vermont, the horses ran away and a boy had his leg mashed to pieces; a young doctor was sent for, and he said send to my father's for the instruments and have his leg cut off, but an old doctor in the neighborhood, whom the young one called an old *granny*, said, let us try to plaster it up; this was done, and in three or four weeks the boy had a better leg than a

wooden one, and afterwards had a good leg. And I propose now that we try to save instead of trying to kill. The nerves are all very much alike, and if you wound a nerve in almost any other place it may be brought back to a healthy condition. Why cannot a nerve in the tooth be made alive again?

What I told that Dr. Westcott said was literally true. I took it at the time very unkindly, because I thought he meant me; for I used to kill the nerve and fill the tooth over it, but it was a species of quackery.

DR. ROBERTSON.—The general run of discussion seems to have been on the second aphorism. And it seems to indicate that there is no other treatment except the destruction of the exposed nerve. In my own practice for the last two years in a great many cases where the nerve was not inflamed, but where I had exposed it in preparing the tooth for filling, I have used a small quantity of collodion, which makes a smooth coat over the exposed nerve, and I have filled on that with almost uniform success. And it seems to me that it is better than destroying the nerve. I have practiced it for two years with scarcely a failure that I know of. It seems to me that these aphorisms should be worded somewhat in accordance with the suggestion of Dr. Westcott.

PRESIDENT.—I would explain that we have now under consideration the best mode by which a nerve, when it becomes necessary, may be destroyed. We may take up the best mode of preserving it afterwards.

DR. ROBERTSON.—That is why I object to it, because it would seem to imply that that is the only mode of treatment. On motion, adjourned.

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#### AFTERNOON SESSION.

Was occupied by addresses from Drs. J. H. Foster and E. Townsend,\* to which the public were invited.

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#### EVENING SESSION.

Dr. R. Arthur read a report on American Dental Literature.

Dr. Townsend before reading a paper said—I must premise that this paper, which I am about to read, was prepared under the expectation that subjects would be needed for discussion, and as

\*This address we shall publish in our next number.



this is an important subject, and one in which there has been a great deal of mal-practice, I thought it proper to be brought before the Society.

[Reads a paper prepared by himself on the "Treatment of Irregularities of the Teeth."]

DR. ALLEN.—I must coincide with Dr. Townsend with reference to the impropriety of removing the temporary teeth. I have for some time stood alone in our city in reference to extracting them. I have again and again refused to do it on the ground that it would cause an absorption of the alveoli, and a consequent contraction, and I have made it a point never to remove them unless the permanent teeth were making their appearance, and the fangs of the temporary teeth are likely to cut through the alveoli and gum. There are cases where the fangs do not absorb properly; in such cases it is better to remove them, for the permanent teeth are beginning to crowd them out. There has been a great deal of mal-practice in our city in that particular, and I am glad that the subject has come up, for it has perplexed me very much in getting the teeth straight, and I am in hopes that there are those here who have found less difficulty in regulating these teeth than I have. I have found it to take a year and a half to get a set of teeth true. My course of treatment has usually been, either to employ an inclined plain, to bring them out, or springs, or wedges or gum-elastic between the teeth or ligatures. I have adopted them all, but I hope I shall get light on the subject. I think it a very important operation to be able to treat the permanent teeth successfully so as to get a true arch, but I always make it a point never to remove a temporary tooth so long as it can be retained with propriety in the socket.

To a question as to his mode of treatment, Dr. Townsend said, the cuspidati were entirely outside of the arch, the bicuspidis were contracted so much that the point of the tongue could be got between them, and by putting in wooden wedges I got them so very much apart that the cuspis of the upper fell into the cuspis of the under jaw. The next thing was to bring out the incisors, that I did by making a gold band which pressed upon each of the cuspidati; then I had loops of gum elastic which were hitched upon this piece of gold, and these bands were changed every two or three days. When these were brought entirely into their places,

there was another difficulty, which was this, that the molar teeth were so long that these did not strike up to the top, so that they had to be retained by ligatures. I had to tie the strings and leave them there until they could tighten them themselves.

DR. WESTCOTT.—I suppose this is one of those subjects which is very difficult for reporters to make clear, or to be understood by ourselves without models. There are a few general principles which may be set forth in a general way. I would simply say that it is a subject to which I have given much more attention the last two years than in all my course of practice before, and if we could have a few models, to show precisely the mode of operation, I think we could make it very interesting to ourselves. The Dr. has mentioned the use of gum-elastic in regulating teeth. There are only two general points that I think of, that I care to state, and the one is that my experience has led me to this practice. I almost invariably make the plate precisely as if I was to make artificial teeth. Such a fixture as may be removed as easily as any plate of that sort, and with the strict injunction that it must be removed regularly and the mouth cleansed. Almost any thing you can put on is liable to injure the mouth and render the breath foetid. And it should be easily removed so that any intelligent person can adopt it from day to day. I can only speak of gum-elastic fixtures in a general way. I have excluded them from my practice by having something to which all the fixtures are attached, so arranged, that you can change their direction, and by means of this I have been able to regulate any cases that I have had occasion to regulate, for two or three years. An objection to gum-elastic is, that if you use it of sufficient thickness it is bungling. I am only speaking of my own practice. As I said before I have long since ceased to condemn processes. I had a case under my hand, from a distance; a little girl of ten or eleven years of age came fifty or sixty miles to have a tooth regulated—a lateral incisor had come apparently almost out of the roof of the mouth, and it was behind the regular arch of the under jaw. My plan was at once to make a plate as though I intended to set in an artificial tooth, with firm clasps, to the temporary molar which she had in her mouth, then by soldering a spring on the outside of the clasp as it passed around the tooth, so that by bending it in any direction you pressed it down, and attaching the ligature to



the tooth, I was enabled to throw it in any direction, that kept up a continual pressure, and it could be removed at pleasure. After straightening it a little in that way I ceased to use ligatures. I made a constant spring under the tooth and it was so arranged that you could push it in different directions. It is necessary under such circumstances to keep the teeth apart, and instead of resorting to ivory blocks and that sort of thing, I soldered on gold blocks, and by this arrangement I was not under the necessity of seeing the case more than four or five times until its completion. After two or three days I sent her home, and she was there a fortnight, then she came to me again, and as soon as the tooth came out a sufficient distance for the under teeth to come under it, I took away the fixtures. My object in rising was mainly to express one or two general ideas. First, the necessity of having a permanent arrangement that sits easy, and which you can rely upon as a base work all the way through, and second, so arranged that it can be easily removed. By avoiding gum-elastic, and having the permanent plate so arranged, it would save a great deal of trouble.

DR. TOWNSEND.—For the mode of using the gum-elastic, I am indebted to Dr. Tucker, of Boston, who furnished me with some in tubes. I would state that we are very seldom compensated for this kind of work.

After this case was over to which I referred, the mother requested that I would send in my bill, which I did for \$150, and the same afternoon the father called upon me with a check for \$300, and said he was only too thankful that I had succeeded at all.

DR. WHITE.—I am very glad that this subject has been broached this evening. I think that although the regulation of the permanent teeth is a very important subject, yet it is more important to know how to preserve the temporary teeth so long that it may not be needed. It is strange that there is so much necessity for regulating the permanent teeth for the last few years. It argues either a want of confidence in nature to produce in a regular manner, or that the intermeddling of dentists have done more harm than they can remedy.

I would state, that I consider the subject of the regulation of the teeth of too much importance to discuss here without

models. The President saw a contrivance in my office some years ago, which consisted of a spring, so arranged, that in its effort to straighten, all the time was pressing the teeth out. It acts in this way, and does not excite inflammation. A small cut of it was given in the News Letter some time ago. The question has been asked of me here, what can we do when a child comes crying with the toothache. I would remark upon this that it is no more necessary to extract deciduous than permanent teeth. The treatment of the nerve will depend upon the condition of the tooth. It is true that as long as the tooth is in a vital condition, the fangs will go on absorbing, and as soon as the vitality ceases, the absorption will cease—maintaining the vitality of the deciduous teeth as being a means of absorption. If a patient comes to me at two or three or four years of age, I have every confidence that I can treat it as well as a permanent tooth. If the pulp is exposed, it can be destroyed and removed, and the tooth filled, and the tooth may be saved as long as required.

In reference to the treatment of toothache in children—I have less trouble in treating it, than in grown persons. It seems to me that they suffer less from the same kind of inflammation. It is a common thing for children to cry for three or four days with toothache, till the family is out of patience, and want the tooth pulled. The tooth is tender to the touch, and the pulp is dead. I have found that by merely opening the dental cavity, and getting rid of the dead nerve, the pain will subside. Every day I have to open cavities to relieve patients, and often I put nothing in at all, letting them take the risk of aching again. When I treat the teeth for pain, I sometimes apply tannic acid and morphia to relieve the pain. In this way I coax along the deciduous teeth. I would state that I have only seen three or four cases that I can trace to natural irregularity. It is mostly artificial.

DR. DUNNING.—I wish to say that my practice with reference to deciduous teeth that are aching, corresponds almost entirely with that of Drs. White and Townsend. I am as anxious to retain them in their places as they are. There is one point, however, which I think was not touched upon by them. I think that where the pulp has died from exposure, and I have removed it from the tooth and filled the fang, I have found that all the symptoms of ulceration and irritation in the gums, have yielded much more



kindly to that cleansing treatment, than in adult teeth. I found on examining my daughter's teeth, that one of them had the nerve exposed. I removed the nerve immediately, and filled its place with gold. The child has never had a moment's pain with it since. It has been with me a question I have hardly known how to decide, what was my duty when those cases were brought to me in the hurry of ordinary professional engagements—parents saying they are tired out with the crying of their children. I am perfectly satisfied that if I had the time to devote to these cases, I could generally relieve the pain and preserve the tooth till it was time to be removed. My course is generally to advise that they should retain it as long as possible. In those cases where children are brought to me regularly, I plug the deciduous teeth carefully, watching them with the same care that I do the permanent teeth. I direct the parents to have them thoroughly cleansed, not only with the brush regularly, but with floss silk, to prevent decay between them. In such cases, and with children of my own family, I have never found any difficulty; but parents do not think that children's teeth require attention. They attach about half-price degree importance to them in every respect. I have thought that I should like to confine my practice to the treatment of children's teeth, for there is a pleasure in knowing that you may do so much to render a long life happy.

DR. HILL.—I would wish to say that this subject is exceedingly interesting to me, and it is important to the profession and to the public; and if any thing that we can say or do will have a tendency to spread abroad in the community, an impression of its importance, we will have done ourselves and the profession and the public generally a very important service. There are so many difficulties in following out the dictates of our own judgment in matters of this kind, that this subject becomes more perplexing to the operator than almost any other. In the first place, the want of a proper remuneration for the trouble.

Secondly, the difficulty of operating upon little children. It is almost impossible to get children to consent in my practice, and I have supposed that I could manage children as well as the generality of gentlemen in the profession. The great thing is in the treatment of deciduous teeth. The mere cleansing of a cavity, when there is pain, I have found to give relief. If this will not

answer, I have found that the application of chloric ether is almost always successful, and it being seldom the case that I can fill a tooth in a child to give satisfaction, I have recourse to one thing. The gentlemen will excuse me for naming it, but as we are giving the results of our experience, I may mention, that after cleansing the cavity, the easiest and best thing I know is to put in a little of "Hill's Stopping" and press it in the cavity ; it has almost always given relief.

On motion, adjourned.

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THURSDAY MORNING, AUGUST 7.

The committee appointed to revise and alter the Constitution, reported progress, and were continued, to report at the next annual meeting.

Dr. E. Townsend then presented the following, as an amendment to the Constitution :]

"Each and every member of this Society shall either have become such by virtue of his attendance, in person, by proxy, or by letter, at the time of its formation, or shall be afterwards elected as prescribed by the Constitution, and subscribe to the same.

*Resolved*, That all delegates appointed to represent recognized Dental Colleges and Associations of Dental practitioners, organized for scientific purposes, shall be admitted to all the rights and privileges of active members of this Society, as fully as if they had been elected to such membership by ballot, under the provision of Article 6 of the Constitution."

This resolution was followed up by the following argument on the part of Dr. Townsend, which, together with the resolution, was laid on the table and ordered to be printed :

*Mr. President* :—I have offered this amendment to our Constitution for the purpose of supplying a provision which is so completely within its scope and purpose, that its absence seems a mere oversight in the original draft of the instrument. The election by ballot, which is the prescribed mode of admission to membership in all cases, as the Constitution now stands, is, of course, but a method of ascertaining the worthiness of the applicant, who, in all cases except those contemplated by the amendment now submitted, comes to us without other warranty than his



personal or individual character, upon which it is right and necessary that this Society should make up a deliberate judgment before admitting him and thereby endorsing him. But delegates from recognized Dental Colleges and Associations—in other words, bodies of our professional brethren which we acknowledge and respect—come to us with credentials which we are bound to honor as much as we ask other bodies to respect and honor our own, and it is a violation of right and propriety to make such delegates wait at our door for admission, after they have sent in their cards and letters of introduction, while we go through the form of re-judging the judgment of the men who sent them. We certainly would not willingly have our trusted and honored representatives so received by any society of equals in the world, and I know we would not send representatives to any society which held itself our superior. When a reputable association of scientific men have selected delegates to any other with whom they are willing to enter into professional reciprocities, to examine in any way or to subject to any test the worthiness of such delegates, is to disregard and discredit those who gave them their appointment. I need say no more on this point, except to add that the amendment, in effect, does nothing but allow the endorsement of respectable societies and colleges to pass unquestioned with us; and members, so admitted, will come in, subject to all the conditions and entitled to all the privileges, and none other, that attach to those admitted by our present mode of initiation. They will stand to us precisely as if we had unanimously elected them, and it will remain with them, as with others, to sign the constitution and comply with its provisions, in order to entitle them to equal participation with us in all that pertains to full membership in our society.

Mr. President—Mere verbal or ceremonial amendments to constitutions are not worthy of the time they occupy, and I would not propose one unless I thought the *words*, which I suggest, meant *things*, and the *forms* stood for important substance. We *style* ourselves “The *American* Society of Dental Surgeons,” and our objects, as they are stated in the preamble to the constitution, are, among others, “to promote union and harmony among all respectable and well-informed Dental Surgeons; and to advance the science by free communication and interchange of sentiment, either

written or verbal, between members of the society both in this and other countries." Thus the name and the attitude which we take, assume to fraternize the men and centralize the movement by which our profession is to be carried forward to its destined position in the world of science ; and it is incumbent upon us to adjust and address ourselves to our function by every proper means that promise to promote our aim.

The adoption and publication of this amendment in connection with our other action on kindred points, I conceive will indicate the liberal and cordial spirit which animates us, and will be received as an earnest overture to the professional brotherhood, every where, for that correspondence and co-operation which must answer to the achievement of our great design. Eleven years ago our society rose out of the crowd of professors and pretenders to dental skill, for a purpose which happily stands well accomplished now, whatever agencies may take the credit of it. I mean that it drew a line of distinction between the rabble of quacks and the men of honest pretensions, expecting that the profession would soon be found *within* its membership, and the charlatans *without* ; or, at least, that by its efforts to help all other agencies, a standard would soon be established for public judgment, which would render honor to whom honor was due, and rid the profession of all the responsibility and discredit of empiricism. Now, this work is well enough accomplished to answer all the ends for which it was undertaken, and the attitude of offensive and defensive war should be changed in all points, so that no prejudice or suspicion shall be allowed to remain, that we are taking more care of our character and caste than of the great interests of the profession.

Mr. President—A society is like other creations made of live materials. When it ceases to grow, it begins to die ; not consciously, perhaps, but none the less certainly. The laws of the human *body* well represent the laws of human societies. Whenever the *old* ceases to be replaced by the *new*—when the work of assimilation and the incorporation of fresh elements stops, the body, or the society, is on the turn ; and decline, once begun, means death for its conclusion. Churches need revivals, and political governments, occasionally refresh themselves even with a revolution. Scientific societies also demand renewal in spirit



and in *men*, but they can secure it by providing for their regular growth and constant accommodation to the changed conditions around them by their corresponding changes within them. I know I do not mistake the feelings of this association, and I am sure I understand its objects. They are both liberal and enlightened, and they aim earnestly at the greatest advancement of our profession which they can contribute to secure.

Let us manifest, by every means within the compass of our power, that we design and desire the union, harmony and co-operative activity of every worthy worker in the cause of progress; that we have no jealousies of rank and no privileges of age to defend; that we do not wish to establish a close corporation of exclusives, but a liberal republic of dental literature and science. We might invite delegates in words of respect, and welcome or wait until they offered themselves, and then admit them to the courtesies of our annual meetings; but such men as there is any interest or honor in inviting, would not come to us as guests to receive our hospitalities. They would come, and we would receive them, as equal members, on the level platform of a broad brotherhood that exchanges honors and benefits evenly.

There are Dental Colleges and Dental Societies now in several regions of our own country; and there are some associations abroad whom we would warmly welcome into friendly correspondence and fellowship of effort, and we will have done our duty in the matter, by opening our doors widely for their admission.

The fifteenth Article of the Constitution requires a majority of three-fourths of all the active members or Fellows present to carry an amendment. I am flattering myself, sir, with the hope of an unanimous vote for this one which I have the honor to propose.

Dr. Dunning's aphorisms on the treatment of exposed dental nerves, on motion of Dr. Arthur, was amended, so that in place of the first and second aphorism, it shall read—

1st. A tooth, whose nerve is exposed, *may* be permanently saved by entirely removing the pulp and filling the place occupied by it with gold.

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THURSDAY AFTERNOON, AUGUST 7th, 1851.

On motion of Dr. Dunning, the discussion on the aphorisms, presented by him, was discontinued.

The President then read the following, (as amended by the Society :)

1. The teeth, in a natural state, are exposed, and, from a variety of causes, are subject to decay. Cavities are formed both in the enamel and in the bony structure beneath it, which, by judicious management and careful treatment, may be stopped, so as to preserve the teeth in a perfectly sound and healthy state, not only for years, but for a long life. Adopted.

2. Gold is the best substance hitherto discovered for this valuable purpose. Adopted.

3. Tin foil may be used with safety; but it is of short duration when compared with gold, and cannot be permanently relied upon. The instances are but few when tin is used, where gold would not have answered better by skilful treatment. Adopted.

4. As the success of this delicate and most important operation on the teeth depends much more on the skill of the operator than it does on the substance used, the dentist should always be allowed all the time required to form and perfect the cavity, before the metal is inserted. Adopted.

5. The tenderness or soreness of the tooth, or adjacent parts, should never be permitted to operate as an apology, on the part of the patient, for restricting the operator in the preparation of the cavity, and in the use of the force necessary to the proper insertion of the filling, which should be made as hard as possible and as impervious to moisture as solid metal. Adopted.

6. The proper introduction of the gold, in many instances, requires that a portion of the sound part of a tooth should be removed by cutting or filing, which patients frequently object to having done, from the great injury that has followed the operations of unskilful dentists. The objection should never be made if a skilful operator is employed; if not, let the teeth remain until such an one can be found, for the former will do them, in the simplest operation, much greater injury than benefit. Adopted.

Dr. BRIDGES.—I would like to get the views of the members on filing the teeth. I have had patients to say, "Why, Doctor, what do you do with those files? Dr. Parmly and others don't use them." I would like to know how much you use them?

The PRESIDENT.—Those who say that the President does not use files are mistaken.



7. It becomes necessary, in many instances, to separate teeth, preparatory to stopping them, in order to afford the operator a suitable access to the cavity; and sometimes, particularly in the front teeth, instead of cutting or filing, it is desirable to effect such separation temporarily, which may be done by gently forcing between the teeth small wedges of wood or slips of India rubber. Adopted.

8. The use of amalgams and pastes which, being introduced in a soft state, become more or less hard in the tooth, is utterly prohibited by the Society which gives its authority to these maxims of dental practice—it having been proved unsuitable and highly objectionable as an ordinary filling for teeth, even when used by the best practitioners. Adopted.

Dr. WHITE.—I would like to hear that aphorism read again. As it was written some years ago, we might make some alteration now. (It is read.) I would move that all after “many of those who make a wholesale use of it,” be stricken out. Carried.

Dr. TOWNSEND.—I would make it a little stronger than it is at present, by saying that the article was unsuitable, *even* when used by the best practitioners.

Dr. WHITE.—I am no advocate of paste or amalgam, having never used it in my life. But it seemed to me that this language was too strong for us to use, and it would cut off those young men who would like to have the privilege of making experiments which would satisfy them.

PRESIDENT.—I would make this alteration: “It having been proved unsuitable and highly objectionable as an ordinary filling for teeth, even when used by the best operators among those who advocate its use.” Carried.

9. Some teeth, in their very structure, are more liable to decay than others; and, whatever may be the cause of their liability, whether hereditary or superinduced by disease of the general system, or by local affections, it becomes exceedingly difficult to save them. Therefore, the best material and the best skill should always, and in all such cases, be employed. Adopted.

10. The greatest difficulty connected with stopping in such a manner as to arrest decay entirely and save the teeth, results from the habit of individuals, in postponing the operation until the decay has reached the internal or nerve cavity, or has otherwise

destroyed so much of the substance of the tooth as to make stopping inadvisable or impracticable. Adopted.

Dr. ARTHUR.—It seems to me that the latter clause of the aphorism changes its meaning. It is at least ambiguous, if you regard the destruction of the nerve as an useful operation. It seems to me that this would lead a person, unacquainted with the subject, to the conclusion that, if the nerve became exposed, it would be impossible to save the tooth.

Dr. ROBERTSON.—I concur with Dr. Arthur in that, and I think if the word "sometimes" were put in, it would be an advantage.

PRESIDENT.—I will alter it by putting in "in many instances."

11. A cavity is never too small to require a filling, provided there be a positive perforation of the enamel, and more especially if the cavity extends into the bony structure beneath. Adopted.

12. As stopping teeth is the best and most satisfactory of all the operations performed by the dentist, no substance but gold should be relied upon as a permanent filling, and no skill but the best should be employed in using, adapting and securing it. Adopted.

Dr. ARTHUR.—As it was supposed these aphorisms would give rise to discussion, and as they have not, I would propose that we discuss the subject of filling the teeth generally; and that we defer the discussion on the irregularity of the teeth till next year, and that in the meantime, every gentleman so disposed, take this subject into consideration, and if he can bring models and cases with him and state to the society his mode of treatment, I think that a great deal of good might be accomplished—for this is a subject about which we have no general views. Every one has pursued his own course, without reference to any body else.

Dr. WHITE.—If I am in order, an idea strikes me with reference to one of the aphorisms read that I would like to bring before the Society. I think it would be well to discuss the subject of what condition should the gold be in, to be best suited for filling cavities completely.

Dr. BRIDGES.—Before this matter in relation to the regulation of the teeth is passed, I would like to make one or two remarks. Last night we had to choke off this subject, and I had hoped



that this morning we would have an opportunity of communicating freely on this subject.

Dr. ARTHUR.—I made a motion that the discussion on this subject be deferred till the next meeting.

Dr. BRIDGES.—I merely wanted to make an observation that the members should go to asylums, in order to see the condition of children's teeth.

Dr. WHITE moves that the Society go into a discussion of the best condition of the gold for plugging teeth.

Dr. HILL.—Would it not be better to make a motion that we now have an opportunity for miscellaneous remarks, and I now make that motion. It is carried.

Dr. ROBERTSON.—If there is nothing else before the Society, I would state that hitherto in my practice, I have taken some pains to find what would make the best dies for striking up plates. Latterly, I use an alloy by which I expect to fit the first time, and if I do not, I am responsible for it. The alloy is a mixture of one part copper, two parts antimony, and six parts tin.

The copper is to be first melted. The advantages of it are that it shrinks very slightly, and it is so hard that the minutest point on it cuts its mark in a gold plate. I use lead for the female casting, and sometimes I prefer using type metal. Pure lead, without considerable care, may stick, and it may be necessary then to use chalk. It is so hard that it has a disadvantage of making the inside of the plate a little rough.

Dr. BRIDGES.—I merely wanted to remark that I have been for some time dentist extraordinary, ordinary, and certainly general, to the King's county poor-house. It is very easy for a man to get a theory, but it is very hard to find one to suit all cases.

With the practice of Dr. White and Dr. Parmly, it is very different from what it is in a place where they have perhaps never seen a dentist in their lives. I can find five deformities from leaving the deciduous teeth in too long, for every one that a stated practitioner can show me from taking them out too soon. I had an invitation a few years ago to visit two asylums, and I found the children's teeth in a most wretched condition. Some of the deciduous teeth were as tight as the permanent, that were crowding others out of their places. I think the deciduous teeth should in all cases be taken out when the child becomes eleven or

twelve years of age. I have often waited for the expansion of the maxillary bone, and have often been disappointed. The request I was going to make, was that there be a committee of an indefinite number appointed to investigate this matter of children's teeth, and that they take the opportunity, between this and the next meeting, of visiting asylums, where the children have not been visited by dentists, and that they supply casts at the next meeting.

This proposition was adopted, and the committee appointed.

Dr. WHITE.—I offer the following resolution, with a view of establishing another committee upon a subject that I deem quite as important as this.

*Resolved*, That a committee be appointed to make microscopic observations, with particular reference to the characteristics of salivary calculus, and the fluids of the mouth in connection with the human teeth, and report at the next annual meeting.

THE PRESIDENT.—This is a very important subject. Dr. Goadby, who assisted in the investigations made by Dr. Nasmyth, of Edinburgh, is now in this country, and I have no doubt will give us such information as will make these investigations most useful.

The resolution was adopted, and the following gentlemen were appointed the committee: J. D. White and E. Townsend, of Philadelphia.

Dr. WHITE.—I wish to call special attention to the manner in which Dr. Arthur uses gold for filling the teeth.

Dr. ARTHUR.—I have for some time been making experiments with gold for filling teeth, and have fallen upon what I regard a very great improvement. I have no doubt gentlemen will be very much surprised at it, and will be doubtful of its utility. I use gold never finer than No. 30, and from that to No. 50, but I generally rely upon No. 30. I use this not only for strong but for frail and most delicate cavities. By using this, I can do business about one-third greater in amount, and not only as well as when I used finer gold, but a great deal better. This is well worth the trial, and can be easily tested. The manner in which it is used is essential to success.

It is well known that No. 15 has been found very harsh and unmanageable, and so it is if the gold I use is folded even once.



I take simply a slip of the gold, nearly or quite the size of the cavity, and I generally use very small instruments for condensing after the gold is introduced. I don't know, however, that I have made any material change in my instruments since I commenced to use this thicker gold. I have found gold of this kind, in my hands, more manageable than any other. It is obvious that the surface of the filling with this gold must be better—there must be a fewer number of edges, and it will take a better polish.

PRESIDENT.—I don't know whether any one is present who was at a meeting at which I spoke of the gold used by Waite, of London. He was the Hudson of England when I first resided there. I thought the stoppings from his hand were different from others, and I felt anxious to know how he made them so solid; I made all the inquiries I could outside of his house, then I went to his house, and his brother brought into the room where I was, a part of a sheet of gold which was about the thickness of the lead which lines the China tea chests. He said there was but one man in London that could prepare gold in that way—it was as soft as the lead itself, and I have often wished that I could find such, but I never could. This corresponds with the remark of Dr. Arthur. Some years ago a very ingenious man who had something to do with the invention of the cotton gin, took it into his head that he could do much in the way of saving teeth. He drilled into the tooth, then cut a screw on the end of a gold wire, and screwed it into the tooth and cut it down, and it was one of the finest fillings I have ever seen.

Dr. ARTHUR.—I have used gold from several manufacturers. That which I now use I get from Abbey & Son. I find that the gold produced by them is generally of uniform quality at least. I do not wish to make an invidious comparison between the gold made at this establishment and that of other manufacturers; but it is of great importance in using gold of this kind that it should be of the best quality, and perfectly annealed. I would certainly advise any one who is disposed to use the gold of the kind I propose, if they are not satisfied on the first trial, to use that of several manufacturers before they throw it aside.

Dr. ALLEN.—I have invariably used gold as high as No. 12, and prefer it, but I am the only one that uses it in our city.

Dr. WHITE.—I have used gold that is very heavy, and very

light, and where we had to double the sheet upon itself, I am sure all must admit that it must leave a little opening and must become a little hard, so that it takes more pressure to accomodate it to the cavity—hence in a great many thin cavities I have used No. 3.

I will cite the treatment of a case in point. A lady had a front incisor filled three or four times that was decayed from the outer edge, leaving nothing standing except the enamel posterially and at the cutting edge. It had been filled several times in three months, but carefully, for fear of breaking. The last dentist, a gentleman in practice from twenty to twenty-five years, told her it was impossible to fill it without breaking. Some one induced her to call upon me, and I had some of this thin gold which I put into the cavity with gentle pressure. Having removed the decay the cavity was larger than before. The plan I took to cleanse it was one suggested by Dr. Williams. After removing the principal part of the decay, I worked in with a small instrument and cotton, then I put this fine gold in until the cavity was filled, until I came within the thickness of the enamel to its surface. There was only now a small cavity and this I completed with No. 4. The lady is now a resident of your city. She was absent one year, and upon examination, the tooth appeared as perfect as on the day she left. I merely state the case to show that very light gold is sufficient to accomplish the end desired; but whether heavy gold would have accomplished the same end I know not. I have tried No. 50 in a few similar cases, and I believe I made very respectable fillings, but not so good as with gold that I was accustomed to.

Dr. ARTHUR.—I have found that No. 30 worked a great deal better than No. 50, so much so that I have discarded it.

Dr. WESTCOTT.—If this discussion is at a point where an interruption may be tolerated, I would like to offer a resolution that when this Society adjourn, it adjourn to meet at Syracuse, New York.

Dr. HAWES wished to amend the resolution; in the place of Syracuse, insert Newport.

Dr. ALLEN wished to amend by inserting Cincinnati.

The further discussion of this resolution was postponed.

Dr. DUNNING.—I generally use No. 4, and would like to get No. 3 if I could.



Dr. ARTHUR.—It must be remembered that the point on which the principal advantage depends, is that it must be used in a single strip and not doubled upon itself.

Dr. WHITE.—Is it not being doubled while being put into the cavity. When you put the gold in the cavity where you want it, does it remain there?

Dr. ARTHUR.—It is not a half dozen or more surfaces folded together to be condensed afterward, but is condensed, fold after fold, as it is put into the cavity to be filled. But the utility of gold in this form can only be tested by actual trial.

Dr. WESTCOTT.—On the point of keeping the filling where you put it, I will make a single remark. I have been much in the habit, for two or three years, of filling teeth with both hands at once. I had never done it or seen it done before. I manage to hold my napkins in a way that I can fill with my left hand and use two instruments, where the cavity is of such a shape that it is important that you have one point packed thoroughly, so as not to have it come out again. It is very risky, if you have a piece tumble out several times. You get it hard, by the working. I use only one hand for filling, and the other for holding it precisely and firmly where I know it will be wanted. I think that every dentist will find that he can do more in that way than he can imagine. This is not one of those cases where you are under the necessity of hiding from your left hand what your right hand doeth. When there are large cavities, I uniformly employ an assistant. That idea of keeping the foil where you put it is important, with bicuspidetes particularly, and those teeth where the cavity is long and narrow.

Dr. FOSTER.—I invariably use No. 4 gold foil in all cases—large as well as small cavities. In some cases I find it extremely difficult, even with most malleable foil, to keep it where I place it. If I have to use a different foil, I shall have to learn my lesson over again; for, as I use it, it must be rolled together, and it is important that I should have the most malleable foil. I have tried, repeatedly, in large cavities, to use thicker foil, thinking I might get along faster; but it rolls about and gets out; and I now invariably use No. 4.

Dr. J. TUCKER, of Boston.—I have used nothing but No. 4 for the last fifteen years, except where other has been sent to me for trial; and in such cases I have always failed, and given it up.

Dr. ARTHUR.—The kind of gold I have recommended could not be used in the manner described by Dr. Foster.

Dr. WHITE.—I would like to state in what manner I use it. For general use, I take a strip of gold and roll it together spirally. I use No. 4 and No. 6, pretty equally divided. If I can deliberately press upon the tooth, I use No. 6, but in lateral cavities I use No. 4. If the cavities are very large I use pellets. I take a straight and narrow watch spring, to which I have added a little round piece of wire, so that I can turn it with facility; I fold it on this watch-spring flat; this facilitates my rolling. In some few cases I use it in that form for small cavities. In this way, it is folded so that every leaf is in close contact, and the atmospheric air can be pressed out better than if it is folded.

Dr. ARTHUR.—Gentlemen may have been in the habit of using the gold of the ordinary number in a different way from what I have done. I almost invariably folded it in strips on itself. This, it will be seen, is a considerable step toward using the thicker gold, which I propose. And it may not, therefore, be found, at once, so advantageous in the hands of others as I have found it. But I am convinced that, if it is fairly tried, it will be found very useful in many cases, even if it should not be adopted for general use.

PRESIDENT.—The next business, if there is no more discussion, is the election of members.

When Mr. C. C. Williams of Philadelphia, was elected.

The President returned his thanks to the friends of the Society for their attendance.

Election of officers took place, when the following gentlemen were elected:—Dr. E. Parmly, of New York, President; Dr. E. Townsend, of Philadelphia, 1st Vice President; Dr. J. H. Foster, of New York, 2d Vice President; Dr. J. Tucker, of Boston, 3d Vice President; C. O. Cone, of Baltimore, Corresponding and Recording Secretary; E. J. Dunning, of New York, Treasurer; D. R. Parmly, of New York, Librarian. C. O. Cone, E. J. Dunning, D. R. Parmly, Publishing Committee. J. H. Foster, E. J. Dunning, E. Parmly, A. C. Hawes, C. A. Harris, H. W. Fenn, Executive Council and Examining Committee.

Dr. R. Arthur was chosen to deliver the opening address at the next annual meeting. The following members were appointed to



prepare essays to be read at the next annual meeting of the Society, on some subject connected with dental theory or practice : Drs. J. D. White, E. Townsend, E. G. Tucker, A. Robertson, John Allen.

On motion, the Committee on American Dental Literature was discharged from further duty.

On motion, a Committee was appointed to report, at next annual meeting, on the state of Foreign Dental Literature. Dr. C. A. Harris was appointed that Committee.

Adjourned, to meet at Newport, R. I., on the first Tuesday of August, 1852.

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For the Dental News Letter.

### SINGULAR CASE OF OSSIFICATION OF THE LINING MEMBRANE.

GALENA, August 20th, 1851.

*Messrs. Jones, White & McCurdy :*

GENTLEMEN—I have just extracted the root of the upper right medial incisor, from the mouth of W., aged eighteen years, which is to me a curiosity, from the fact that, apparently, the bulb of the nerve is projecting, and perfectly ossified. The tooth was broken four years since, by the kick of a horse, and its fellow knocked entirely out. The appearance is, that it was broken near one-eighth inch above the dental arch, and the membrane left projecting one-sixth to one-eighth inch, yet so protected by the surrounding parts as to allow a deposition of osseous matter and recession of the membrane until it came within the cavity and closed up the end of the fang with the same osseous matter, forming a perfect protection. It has now all the appearance of the bulb of the membrane—projecting—except color, which is nearly that of the surrounding ivory. It gave him, comparatively, no trouble, until about six months since, when it ulcerated. I have often (as has every dentist of any experience,) seen cases where teeth were worn into what originally was the cavity of the lining membrane, and found it filled with osseous matter. Others may have seen cases like the one described above ; to me it is new, and thinking it might be to others, I give it for what it is.

Respectfully, yours,

I. B. BRANCH.

# THE DENTAL NEWS LETTER.

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OCTOBER, 1851.

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*This issue of the News Letter*, as will be noticed, is entirely occupied with the proceedings of the American Society of Dental Surgeons, which we obtained at considerable expense; and to enable us to give them entire, we have been compelled to add to our regular issue some sixteen pages, making a number of sixty-four pages. We do this cheerfully, believing that our efforts will be properly appreciated by the profession generally. The discussions must, we think, be read with great interest, as they embody the experience and practice of each participant in the discussion. The essays, also, will well repay a careful perusal. We return our thanks to the President, also to several members of the Association, for the assistance they rendered us in obtaining this full and correct report of their proceedings.

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*Correspondents* will, we trust, excuse us for the non-appearance of their contributions; but we shall be enabled, we hope, to attend to all in our next.

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## BUSINESS NOTICES.

*Caution.*—We have again to caution dentists and dealers in teeth against purchasing teeth, for our manufacture, which were never made by us. Occurrences of this kind having come to our knowledge, induces this notice.

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*Corundum Wheels.*—We are now prepared to supply the profession with a variety of these new and very superior articles for grinding teeth, instruments, etc. We are authorized to say, by all who have tested them, that they will cut at least twice as fast as emery. The dentist can readily appreciate their advantages in thus saving labor of the most unpleasant kind.

JONES, WHITE & Co.



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows:

"This case is considered worthy of a special notice, for the following reasons:—The exceeding *vital* appearance which the teeth *maintain* when exposed to the *test* of *artificial light*, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The *manner* in which the *platina pins* are inserted, is also adjudged to be a *decided improvement*. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on next page cuts of our principal medals.

## GOLD MEDALS.



# THE DENTAL NEWS LETTER.

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JANUARY, 1852.

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## REPORT ON AMERICAN DENTAL LITERATURE.

*Read before the American Society of Dental Surgeons, at their Twelfth Annual Meeting, held in Philadelphia, August 5, 1851.*—By ROBERT ARTHUR, D. D. S.

The undersigned was appointed at the meeting of this Association, held in Baltimore in March, 1850, to furnish a report on Dental Literature.

It is known to most of the members present, that this committee, consisting originally of three members, was formed at the annual meeting of 1849. In addition to the special duty of making a report on Dental Literature, the committee was required to take up also the subject of Dental Education.

Upon consultation, two difficulties occurred to the members of that committee; they could not but believe that the duties assigned it were more than it could profitably attend to, and there was doubt as to what the society desired in the way of a report on Dental Literature. For these reasons nothing was done until the meeting above alluded to was called.

It was then, after some discussion, decided that the committee on Dental Literature should be exclusive of any other subject, and that its duties should be confined to an examination of American Dental Literature. For reasons stated at length at the time, this restriction did not meet the views of the undersigned, and although he consented to perform the duty assigned him by your favor, it was with reluctance and subsequent regret.

In addition to this restriction, the impression made upon the undersigned, from the tenor of the discussion which occurred at the time, was that the society desired nothing more than a brief descriptive catalogue of such works upon Dental Surgery as were the production of American authors.

Governed by these impressions, the undersigned, your committee, engaged in the examination of such works as came within



his reach. These were courteously furnished from the library of Professor C. A. Harris, and embrace nearly every thing upon the subject which has appeared in this country.

The first work published in this country, the first at least within the knowledge of the undersigned, is mentioned in a catalogue at the close of Fitch's Dental Surgery. It is by S. Renners, and was published in 1801; your committee has not been able to procure a copy.

The first work in the hands of the undersigned bears the following title:

*A Treatise on Dentistry: Explaining the Diseases of the Teeth and Gums, with the most effectual means of Prevention and Remedy; to which is added Dentition, or rules to be observed during that Interesting Period.*—By B. T. LONGBOTHOM, Surgeon Dentist. 12mo, pp. 68. Baltimore, 1802.

This is a popular treatise and the author disclaims any intention of endeavoring to make dentists by means of the contents of his little book, regarding the acquirements necessary to constitute a thorough dentist, such as to make it obligatory upon him to study Anatomy and the general principles of medicine.

With a good deal that is fantastical and erroneous, this little work contains no little which is worthy of note, and some of his practice is in accordance with that of the present day. He proposes the cure of alveolar abscess by laying it open to the bottom, and keeping it open by means of lint dipped in tincture of myrrh, or some stimulating balsam. For abscesses of the antrum, he preferred making an opening into this cavity through the socket of the canine tooth. He advises the use of a compress for arresting excesssive hemorrhage, after the extraction of teeth, very much in the way it is now applied. He recommends filling the roots of teeth, when, from any cause, it is not thought advisable to extract them.

He mentions having seen sets of teeth retained in the mouth by atmospheric pressure. This method of inserting artificial teeth has been claimed to be of more recent origin. It has been seen, however, by the readers of the American Journal of Dental Science, that the elder Gardette, of Philadelphia, accidentally fell upon this plan of inserting complete sets of teeth, as early as 1800. Between this little work and the next which

was published upon the subject, so far as has come within the knowledge of your committee, there was a long interval. In 1819 was published :

*A Practical Guide to the Management of Teeth*: Comprising a Discovery of the origin of Caries, or Decay of the Teeth, with its prevention and Cure. By L. S. PARMLY, Dental Professor. 12mo, pp. 198. Philadelphia, 1819.

This, also, is a treatise intended for the public. The author, as the title indicates, advances, what at the time of this publication, was a new theory of the causes of dental caries, which he claims as his own discovery. He attributes caries "to the relics of what we eat or drink, (without regard to quality,) being allowed to accumulate, stagnate and putrefy either in the interstices of the teeth, as is most commonly the case, or else in the indentures on their surfaces, favorable for the lodgement of food."

*Lectures on the Natural History and Management of the Teeth*; the cause of their Decay; the Art of Preventing its Accession, and the various operations, never hitherto suggested, for the Preservation of Diseased Teeth. By L. S. PARMLY, Dentist. 8vo, pp. 108. New York, 1821. Second Edition.

This work, by the same author, comprises three lectures, purporting to have been delivered at the Franklin House, Broadway, New York. The subject is treated generally for the benefit of the public, as in the work above noticed.

*An Essay on the Disorders and Treatment of the Teeth*. By ELEAZAR PARMLY, Dentist. Third Edition, 12mo, pp. 88. New York, 1822.

This is also a popular treatise. In its general arrangement it is divided into three parts:

1st, The Growth of the Teeth.

2d, The Diseases of the Teeth.

3d, Operations on the Teeth.

The broad proposition is here laid down, that decay of the teeth is universally caused by the action of external agents; and Dr. P. states, that the teeth are predisposed to caries in consequence of their sometimes being of less dense structure, and less capable of resisting the action of the decomposing matter.



*The Family Dentist.* Containing a Brief Description of the Structure, Formation and Diseases of the Human Teeth. By JOSIAH F. FLAGG, M. D., M. S. S., Surgeon Dentist. 12mo, pp. 82. Boston, 1822.

This is a popular treatise on teeth, the object and scope of which are set forth in the advertisement with which it opens, viz :

“1. To give, in as few words as possible, a clear description of the structure and formation of the teeth, and to bring to view those circumstances connected with their growth, with which it is important for every individual to be acquainted.

“2. To give a brief sketch of the most common diseases to which they are liable, together with such directions relative to their treatment and preservation as shall enable the reader to take the necessary care of his own teeth ; and of a parent to pay proper attention to the teeth of his children.

“3. To guard against the injurious practice of ignorant operators ; and to remove some of those popular prejudices which prevent many from adopting the only mode of treatment calculated to diminish the liability to disease of these useful and important organs.”

*On the Teething of Infants*, and the Complaints to which it may give rise. By J. TRENOR, M. D., Dentist.

This article appeared in the New York “Journal of Medical and Physical Science,” in 1823. Dr. T. denies the truth of the position, that the irritation of teething is caused by the reflex pressure of the forming tooth upon the delicate membranes in consequence of the resistance offered by the gum, and attributes it to the irritation of the mucous membrane of the gum, caused by contact with the enamel, which, devoid as it is of vitality, acts as a foreign body.

*Treatise on the Structure, Diseases and Management of the Human Teeth.* By ELEAZAR GIDNEY, Dentist. 12mo, pp. 124. Utica, 1824.

This is a rather more extended treatise than any which was published up to this time. It displays evidences of observation and careful reflection upon the subjects of which it treats.

The author contends, that caries of the teeth is produced by internal, as well as external causes ; but gives preponderance to

the latter. He says, that the nerve may be deprived of vitality by extremes of heat or cold acting upon the external surface of the sound tooth, and that it will then suppurate and make its way through the substance of the dentine.

This is not simply a popular treatise, but goes into the subject in sufficient detail to have deserved the attention of the practitioner of the day when it was published.

*A Physiological Inquiry into the Structure, Organization and Nourishment of the Human Teeth.* By J. TRENOR, M. D., Dentist. 8vo, pp. 25. New York, 1828.

Dr. T., in this carefully-considered and well-written paper, denies that the teeth possess that high degree of organization now generally ascribed to them; and, although he does not regard them as entirely devoid of vitality, places them lowest amongst the organized tissues. He attributes no other office to the pulp than that of depositing upon its surface, layer after layer of bone, by exudation, similar to the process by which the shells of the crustacea are formed, until it is, eventually, entirely extirpated. The nourishment of the teeth is entirely due, in his estimation, to the peridental membrane, and he regards the extirpation of the pulp as productive of no injury to the tooth, and strongly advocates the practice. Dr. T. mentions, in this paper, that Dr. Hudson, of Philadelphia, introduced this practice many years before, and declares his own knowledge of innumerable cases of this kind, treated by Dr. H. ten, fifteen and twenty years before, which, at the time he wrote, were in a perfect state of preservation, and in every way as useful as any other teeth.

This is a very interesting paper, and well worthy the attention of every student of dental surgery; and, although I am not prepared to agree with the positions taken by Dr. T., I cannot but regard his paper, as a clear, carefully-considered and plausible argument.

*Observations on Neuralgia, with Cases.* By J. TRENOR, M. D., Dentist, of New York. 8vo, pp. 28.

This paper has no date, but was evidently published about the time of that last noticed.

Dr. T. takes the ground, that neuralgia is caused by inflammation of dense structure, in which, as somewhat in odontalgia, the nerves having no room for expansion give rise to those



extremely painful symptoms which mark this complaint. In accordance with this view of the pathology of the disease, his treatment consists in freely laying open the affected part with a lancet. Although the pain is felt over a considerable region, it may generally be traced to some part very circumscribed in extent. He gives three cases in which the trouble seemed to be caused by the teeth, which, however, were quite healthy; relief was obtained by discovering the spot from which the affection seemed to take origin, and freely laying it open. In these cases the incisions were made inside the mouth, which he advises to be done when it is feasible, in order to avoid leaving a scar in a visible part.

Whether these views are correct or not, it is impossible to read this essay without being impressed with the absolute necessity that the competent practitioner of dental surgery should have a general knowledge of medicine. In one or two of the cases here mentioned, the individuals who were subjects of the disease had been under medical treatment, and were sent to Dr. T., under the supposition that the trouble was caused by a diseased condition of the teeth. Although perfectly healthy, the pain in these cases seemed, by very marked symptoms, so clearly to proceed from the teeth, that the conclusion of every one who had not carefully considered such cases, would probably have led to the sacrifice of important teeth, without affording more than temporary relief.

The first systematic treatise published in this country, intended exclusively for the instruction of those who adopted dental surgery as a profession, appeared in 1829. I have not met with a copy of the first edition, and from the second edition now in my hands, I give the title.

*A System of Dental Surgery.* In Three Parts. I. Dental Surgery as a Science. II. Operative Dental Surgery. III. Pharmacy connected with Dental Surgery. By SAMUEL SHELDEN FITCH, M. D., Surgeon Dentist. 8vo, pp. 551. Philadelphia, 1835.

This work is principally a compilation, as avowed by the author, in his preface to the first edition, and may be regarded as a *resume* of every thing of value which had been written upon the subject of dental surgery up to the time of its publication.

Some of the writers from whom the materials for the work were drawn, are mentioned by the author. It will be seen that he has availed himself of the labors of the most distinguished writers, upon the subject of which his work treats.

“French. Martin, Fouchard, Bourdet, Jourdain, Duval, La Forge, Delabarre, Le Maire, Baumes, Audibrant, Rousseau, &c., &c.

“Latin. Baglivi, Bartholini, and others.

“English. Hunter, Blake, Fox, Murphy, Parmly, Kœcker, Darwin, Rush, Chapman, Horner, Coates, &c., &c.”

This work, however, is doubtless quite as familiar to all the members of this association as to your committee, and it would subserve no useful purpose to offer an abstract of it.

*Remarks on the Importance of the Teeth, on the Diseases of the Teeth and Gums and on the Diseases produced by Diseased Teeth, with their modes of Cure; and Directions for forming regular and beautiful Sets of Teeth, and for the Preservation of their Health and Beauty.* 8vo, pp. 13. By FRANCIS B. CHEWNING, Dentist. Richmond, Va., 1833.

This is a popular treatise. The title is sufficiently descriptive of its contents.

*The Family Dentist, or a Familiar Treatise on the Art of securing a Beautiful Set of Teeth.* By Dr. HOMER BOSTWICK, Dentist. 12mo, pp. 100. New York, 1835.

Besides others, mention is made, in this popular treatise, of works on the teeth by Pleasants and White, copies of which have not come into the hands of your committee. Allusion is also made to

*Dentologia; a Poem in Five Cantos.* By SOLYMAN BROWN, A. M., with Notes by E. PARMLY:

This production was subsequently re-published in the Library part of the Journal.

*An Inaugural Dissertation on the Physiology and Diseases of the Teeth,* submitted to the College of Physicians and Surgeons of New York, and publicly defended, for the Degree of Doctor of Medicine, April 6th, 1835. By SHEARJASHUB SPOONER, Member of the Montreal Medical Society. 8vo, pp. 32. New York, 1835.



*Observations Generales sur l'Importance des Dents.* Par A. L.

PLOUGH, Chirurgien Dentiste a la Nouvelle Orleans. 8vo, pp. 8. New Orleans, 1836.

This is an appeal to those having charge of young persons upon the great importance of giving attention to their teeth. The author states, among other things, this deplorable fact, that in visiting the best schools, he had taken occasion to examine the mouths of the pupils, and nearly always found them in most wretched condition, no attention having apparently been paid to their cleanliness. He further states that he found seventy out of every hundred with diseased teeth, gums affected and breath fetid.

*Guide to Sound Teeth, or a Popular Treatise on the Teeth.*

Illustrating the whole Judicious Management of these Organs from Infancy to Old Age; in which the author will attempt to show that the Teeth of all persons, which are constitutionally well formed, and who enjoy good health, may, by proper management and care, be preserved to the end of life. By SHEARJASHUB SPOONER, M. D. pp. 208. New York, 1836.

This is the most systematic and elaborate popular treatise which had been published up to the time of its appearance. It goes into the subject at large, in full detail, with the object of placing in the hands of every one such a knowledge of the growth, structure and diseases of the teeth, as will enable him to understand the causes which produce diseases of the teeth, and be able to make use of the best means of avoiding them.

In this work, Dr. Spooner first made public the fact that arsenious acid would destroy the vitality of the dental pulp.

*A Public Treatise upon the Preservation of the Teeth*, comprising the most Useful Rules for securing their Whiteness and Beauty, with Observations on the Cause and Prevention and Cure of Caries, and their Effect upon the Health; intended for Families and the Public generally. By M. OVERFIELD. 12mo, pp. 80. Winchester, 1838.

*Dental Hygeia.* A Poem on the Health and Preservation of the Teeth. By SOLYMAN BROWN, A. M., Author of *Dentologia*, &c., with notes, pp. 54. New York, 1838.

*Popular Information on the Subject of Dentistry.* By GEORGE E. HAWES, and CHARLES C. ALLEN, M. D., Dentists. 12mo, pp. 12. New York, 1838.

*Observations on the Structure, Physiology, Anatomy and Diseases of the Teeth.* In two parts. Part I. By HARVEY BURDELL, M. D., Honorary Member of the Philadelphia Medical Society, and Member of the Medical Society of the City and County of New York. Part II. By JOHN BURDELL, Dentist. With Drawings and Illustrations. 8vo, pp. 96. New York, 1839.

*The Dental Art.* A Practical Treatise on Dental Surgery. By CHAPIN A. HARRIS, M. D., Surgeon Dentist. 8vo, pp. 377. Baltimore, 1839.

This is the first edition of a work, which is now so well known to every member of this association, that any abstract of its contents would be a work of supererogation. It was the first entirely original work published in this country for the use of the profession exclusively, and still, after having reached a fourth edition, stands alone. Dr. H. has devoted himself to this work with remarkable energy and industry, and certainly deserves the thanks and regard of the profession for what he has done.

It is just as well here to follow this work through its course. It was first published in a series of numbers, a short time previously to being put into book form, in a weekly literary periodical, published in Baltimore, called the "Monument." It was then issued, after having been considerably modified by the author, in its present form.

In 1845 a second edition appeared, but so much changed, indeed, as to render it almost a new work. The title was then changed to that which it bears at present, viz: "Principles and Practice of Dental Surgery," and was enlarged so as to form a volume of six hundred pages. It was also profusely illustrated. The work in this form was generally acknowledged to be the best practical treatise on Dental Surgery which had ever appeared in any language, and the edition was soon exhausted.

In 1848, a third edition appeared, it was so much increased in size as to contain seven hundred and fifty pages.

In 1850, the fourth edition, now before the profession, was published. Considerable changes, improvements and additions were made in this edition, which comprises some eight hundred pages.



On the first of June, 1839, was issued a specimen number of the "American Journal of Dental Science." The circular of the publishing committee, E. Parmly, E. Baker, and Solyman Brown, sent it forth with many apparent misgivings as to the success of the experiment, and appealed in strong terms to the more intelligent members of the profession to come forward to its support. The object in commencing this publication, was to afford, through its means, a vehicle for useful information to the numerous practicing dentists in the United States. The Journal was to consist of forty-eight pages, twenty-four of which were to be devoted to the re-publication of standard works on dental theory and practice. It was to be issued monthly.

The need of such a publication was evinced by the promptness with which this effort was encouraged. In the fourth number a list of subscribers, embracing the most eminent names in the profession, was published, showing that there were at that time, one hundred and seventy-four subscribers taking five hundred and eleven copies. This may seem a small number, but when it is recollected, that this was twelve years ago, when the number of intelligent reading dental surgeons were very small, it must be regarded as evidence of a remarkable general interest in the undertaking.

During the first year of its publication, the Journal was conducted under the editorial charge of E. Parmly, of New York, and C. A. Harris, of Baltimore, in which city it was printed. It was issued, with some irregularity, in monthly numbers, at the subscription price of three dollars per annum. At the close of the year it came into possession of this Association, which at that time was organized.

The title was changed to that of the "American Journal and Library of Dental Science;" it was to be issued quarterly instead of monthly, as before, and the subscription price was increased to five dollars. It was placed by the society in the charge of C. A. Harris, of Baltimore, and Solyman Brown, of New York. The editors were to be assisted in their labors by twenty collaborators, whose duty it was to furnish matter for the work and to aid in its circulation.

From that period to August, 1850, the Journal continued to

be issued under the auspices of the society, under the charge of several editors, appointed yearly by the society. At the annual meeting of the association in 1850, it was transferred to Dr. C. A. Harris, of Baltimore, the society relinquishing all control of the Journal, which is now a private enterprise.

The publication of the Journal is, in the opinion of your committee, an important event in the history of our profession in this country, and he is satisfied, that it has exercised as great a beneficial influence upon the practice of dental surgery as any other cause within his knowledge. It served, as such a periodical should, to bring about a general acquaintance with the different modes of practice pursued by various practitioners, and, to a great extent, enabled each man to compare his own methods with those of others, and seize upon any improvement which offered.

It may be, that the advantages of a free interchange of ideas between persons employed in the same pursuit, and, particularly, that in which we are engaged, do not impress others as deeply as it does your committee. He is satisfied that nothing tends more towards its real improvement, and he cannot but believe, that the slow and laboring progress made by our important and useful profession for so many years, is to be attributed to the close, narrow-minded spirit which induced every individual engaged in it, (no, not every one; for, if this had been so we could not now look, with pride, upon the position it has taken,) in his self-sufficing confidence, which never looked beyond mere pecuniary benefit, to lock up in his small soul all he had thought or done in the pursuit of that vocation into which, by a good Providence, he had been placed, not for his own profit alone, but for the benefit of suffering humanity. And, he is satisfied, that the wonderfully rapid strides with which it has advanced in the last ten years, is to be attributed to a free interchange of views amongst its members. And this spirit has been more fostered and encouraged by this association, in spite of its defects, in spite of the disapprobation and fault-finding of those who were too much influenced by mere personal feeling to give it their hearty support, and endeavor to make it what they might suppose it ought to be, than by any other body of men any where. And it is his determination, for the general good that must certainly continue to be effected by it,



so long as he has health and strength, to give to the interests of this movement all the energy he can bring to bear upon it.

The Journal was freely contributed to by most of the intelligent members of the association and others who were not connected with it, and contains many valuable papers upon the theory and practice of dental surgery.

Besides the portion of the Journal devoted to the publication of original articles, a portion, as above indicated, was set apart for the re-publication of standard works which were not easily attainable and some which were entirely out of print. The following is a list of these works in the order in which they appeared:

*Hunter on the Teeth: a Treatise on First Dentition.* By BAUMES.

Translated from the French by THOS. E. BOND, Jr., M. D.

*A Treatise on the Diseases of the Mouth.* By J. B. GARROT, M. D. Translated from the French by J. B. SAVIER, D. D. S., for the American Library of Dental Science; with Notes by the Editors. pp. 100. 1844.

*A New Treatise on the Theory and Practice of Dental Surgery.* By J. LEFOULON, Surgeon Dentist, Paris. Translated from the French by THOS. E. BOND, Jr., M. D., A. M. pp. 125. 1844.

*A Treatise on Second Dentition and the Natural Method of Directing it; followed by a Summary of Stomatic Semeology.* By C. F. DELABARRE. Translated from the French. pp. 171. 1845.

*A Critical Inquiry into a Few Facts connected with the Teeth.* By GEORGE WAITE, Esq., Surgeon Dentist, Member of the Royal College of Surgeons, Lecturer on the Physiology of the Teeth, Author of Surgeon Dentists' Manual. pp. 23. 1846.

*Anatomy of the Dental System, Human and Comparative.* By P. H. F. R. BLANDIN, Surgeon of the Hotel Dieu, Associate Professor of the Faculty of Medicine of Paris. Translated from the French by ROBERT ARTHUR, D. D. S. pp. 140. 1845.

*A Popular Treatise on the Diseases of the Teeth,* including a description of their structure and modes of treatment, together with the usual mode of inserting Artificial Teeth. By ROBT. ARTHUR, D. D. S. 12mo., pp. 187. Philadelphia, 1846.

*Complete Elements of the Science and Art of the Dentist.* By

M. DESIRABODE, Surgeon Dentist to the King, assisted by his son. Translated from the French. pp. 552. 1847.

Although published anonymously, this work, and that on second dentition by Delabarre, are understood to have been translated by Prof. HARRIS of the Baltimore College of Dental Surgery.

*A Practical Treatise on the Operations of Surgical and Mechanical Dentistry*, illustrated with four plates. By SAMUEL C. HARBERT, Surgeon Dentist. 8vo., pp. 206. Phila., 1847.

*An Essay on the Structure and Formation of the Teeth in Man and various Animals*. By ROBERT BLAKE, M. D. Revised and corrected, with notes, by C. O. CONE, D. D. S. pp. 128. 1848.

*The Youth's Dentist, or the Way to have Sound and Beautiful Teeth*. Designed for the more intelligent orders of parents and guardians. By J. R. DUVAL, Dentist, Member of the Royal Academy of Surgery, &c. Translated and supplied with notes, by J. AKINSON, Surgeon Dentist, Member of the Royal College of Surgeons, London, &c. pp. 102. 1848.

*A Treatise on the Disease and Surgical Operations of the Mouth and parts adjacent, with Notes of interesting Cases, ancient and modern*. Translated from the French of M. JOURDAIN, Dentist, and Member of the College of Surgery. pp. 410. 1849.

This excellent translation, although published anonymously, is understood to have been made by P. H. AUSTEN, M. D., of Baltimore.

*A Practical Treatise on Dental Medicine*, being a compendium of Medical Science, as connected with the study of Dental Surgery. By THOS. E. BOND, A. M., M. D., Professor of Special Pathology in Baltimore College of Dental Surgery. pp. 307. 1851.

Dr. Bond, in the publication of this valuable work, has very much added to the many obligations the dental profession is under to him, for the warm interest, just appreciation of the merits of dental surgery, as a branch of the science of medicine, and earnest efforts towards its improvement. Supplying, as it does, a desideratum long felt, this work ought to be in the hands of every student of dental surgery.

With the publication of this work, the library portion of the Journal was discontinued.



A few more works will close the list of such as are in the hands of your committee.

*Preservation of the Teeth:* A family guide; being familiar observations on their structure and diseases, with practical illustrations and engravings, embracing the modern improvements in Dentistry. By DAVID K. HITCHCOCK, Surgeon Dentist. 12mo., pp. 92. 1840.

*The Anatomy, Physiology, and Pathology of the Human Teeth,* with the most approved methods of treatment, including operations and the method of making and setting Artificial Teeth, with thirty plates. By PAUL BECK GODDARD, M. D., M. A. N. S., Lecturer on Anatomy, &c., &c. Aided in the practical part by JOSEPH E. PARKER, Dentist. Large quarto, pp. 227. Philadelphia, 1844.

*Teeth, their Structure, Diseases, and Treatments,* illustrated by numerous engravings. By JOHN BURDELL, Dentist. 12mo., pp. 72. New York.

*The Natural History and Diseases of the Human Teeth.* By JOSEPH FOX, M. R. C. S. L., &c. First American from the third London edition. Remodeled, with an introduction and numerous additions. By CHAPIN A. HARRIS, M. D., D. D. S. Illustrated with thirty plates. 8vo., pp. 440. Philadelphia, 1846.

The highly valuable work of Mr. Fox, previously to the publication of this edition, was almost out of the reach of the profession in this country, and could only be obtained at a large cost.

Professor H. has done good service by thus bringing it within reach, and also, by his additions, bringing it up to the great improvements which have been made in Practical Dental Surgery since the time of Mr. Fox.

*The Principles and Practice of Dentistry,* simplified and condensed, for the government of those who value the health of their mouths. By R. D. ADDINGTON, A. B., D. D. S. 12mo., pp. 46. Richmond, 1848.

*A Dictionary of Dental Science, Biography, Bibliography, and Medical Terminology.* By CHAPIN A. HARRIS, M. D., D. D. S., Professor of the Principles and Practice of Dental Surgery, in the Baltimore College of Dental Surgery, author of the Principles and Practice of Dental Surgery, &c., &c. 8vo., pp. 780. 1849.

*A Popular Treatise on the Teeth*, containing a history of the Dental Art, &c., &c.; also a full and accurate account of the history of ether or letheon for the prevention of pain, with directions for use. Designed for the use of families and as a manual for the student and practising Dentist. Illustrated by numerous engravings. Second edition, 12mo., pp. 316. Boston, 1848.

The same volume contains a treatise on the inhalation of ether for the prevention of pain.

*The Medical Student's Guide in Extracting Teeth*, with numerous cases in the Surgical Branch of Dentistry, with illustrations. 12mo., pp. 76. Philadelphia, 1851.

*Ether and Chloroform*: Their employment in Surgery, Dentistry, Midwifery, Therapeutics, &c. By J. F. B. FLAGG, M. D., Surgeon Dentist, Member of the Rhode Island Medical Society. 12mo., pp. 189. Philadelphia, 1851.

The importance of a treatise on this subject at this time is felt, and the experience of Dr. F. in the use of anæsthetic agents has well-fitted him for the work.

Beside the "Journal," other periodicals, devoted exclusively to the interests of Dental Surgery, have been and are still published, all contributing toward the useful object of a freer and broader interchange of views.

*Stockton's Dental Intelligencer* was, I believe, the first of these. There is no copy in the hands of the undersigned, and he does not know when it was begun, or how long it was continued. It is not now in existence.

*The New York Dental Recorder*; devoted to the Theory and Practice of Surgical, Medical, and Mechanical Dentistry. Edited by CHAS. C. ALLEN, M. D., Dentist.

This periodical was commenced in October, 1846. It is published monthly, and has furnished a vehicle for many valuable and useful articles on all the branches of Dental Surgery. It is still successfully continued.

*Dental Register of the West*: Quarterly: Was commenced October, 1847. It is published under the auspices of the Mississippi Valley Association of Dental Surgeons. Its publication is still continued.

*Dental News Letter*: Quarterly: Is published by JONES, WHITE & McCURDY, Philadelphia, 1847, and is still published.



For the Dental News Letter.

## REPLACEMENT OF NATURAL TEETH.

Messrs. JONES, WHITE &amp; McCURDY:

In the July number of your "Dental News Letter," I saw an article on "the Replacement of a Natural Tooth," by B. J. Lipman; and in some remarks which followed upon the subject, that facts which would tend to elucidate the subject and place the practice of replacing natural teeth upon a true basis, would be gratefully received.

Accordingly, I here give you a few facts upon the subject, as also my views in regard to the probable success of such practice, which are founded upon my experience.

I do not know that I have any thing to offer that will be likely to benefit any one, or place the practice of replacing natural teeth upon a firmer basis, "but such as I have, give I unto thee."

Having had two cases in my practice in which I returned the tooth, after extraction, to its natural position, and they being the only cases in which I ever tried the experiment, I am led to believe the thing quite practicable; and that such practice, under favorable circumstances, would generally be successful.

In farther proof of the practicability and success of such practice, I could mention some half a dozen individuals upon whom the experiment has been tried with like success.

One of my cases occurred not long since. Miss H——, a young lady of from eighteen to twenty years of age, applied for some operations upon her teeth. Upon examination, I found two teeth that were too much decayed for the operation of filling; and as they were causing her some trouble at the time, it was thought best to extract them before proceeding farther. She inhaled chloroform, and the offending teeth were extracted. But in removing the second one, owing to a hook upon the end of the fang, which caught under the adjoining tooth, a third one was removed. I immediately returned it to its natural position, and my patient still being under the influence of the chloroform, was none the wiser for any thing that transpired during her absence in the land of forgetfulness.

A few days after the extraction of her teeth, on calling to have the remainder of the decayed ones filled, she complained of considerable soreness about the tooth which had been replaced.

Upon examination, I found the gums in that region considerably inflamed and swollen—so much so, that I deemed their scarification necessary to the *comfort* of the patient, if not to the *success* of the operation.

The circumstances most favorable to the success of such practice, I conceive to be these:—First, that the arterial system of the subject of experiments should be in an active state of circulation. Second, that the parts to be re-united should be in a perfectly normal condition. That it should be a case in which there is sufficient gum to embrace the neck of the tooth high enough up to meet the enamel. And in the way of after-treatment, it may be as necessary to scarify the gums, or, perhaps, make use of both local and general depletion.

Under such circumstances and treatment as above mentioned, I think success would crown almost, if not quite every attempt.

There is but one circumstance, I think, under which this practice should be called into requisition, and that is when from some accident, or some unavoidable cause, a sound tooth has been removed, or, if not sound, one that has a healthy appearance of the periosteum, and one that may be filled after being replaced.

Extracting teeth for the purpose of better filling them, I consider not only unnecessary, but unscientific, the natural socket of a tooth being the best vice in which teeth can be filled.

Yours, &c.,

H. M. ADAMS.

Hallowell, Me., Sept. 22, 1851.

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For the Dental News Letter.

#### WADSWORTH ON OPERATIONS ON EXPOSED NERVES.

Up to the fall of 1845, I looked upon all attempts at destroying the pulps of teeth with arsenious acid, and plugging with the dead nerve remaining, as so certain to result in mortification, from its bad results, that I resolved to decline operating on all such teeth unless I could still save their nerves, or extract them. At this time a friend showed me an inferior molar tooth of the right side, which had been plugged to the apex of its roots, by Dr. Maynard. There was evidence of a small abscess having discharged, but so slight as to have been unperceived by the patient. The appearance of the tooth was so perfectly healthy, that it gave me a feeling of delight, to think there was a method



of saving valuable teeth. Upon calling at Dr. Maynard's, he had gone to Europe. The patient said "he killed the nerve with something he put in; took it out with bearded instruments, and plugged both roots, and then the crown." This was all the information I could ever get upon the subject. The description given by Dr. Wescott, from some unaccountable cause, did not strike my attention when published, and I did not read it until two or three years after its publication, though it would have been highly prized. I went to work with arsenic, kreosote and sulphate of morphine, upon every tooth, where I could not save the nerve; (and here let me remark that it was only after every other attempt had failed;) and the result, up to the present time, will be given below. The able articles by Dr. White, and since then by Dr. Arthur, have, and will prove of immense advantage to the profession and to the public. It is only with the hope that "in a multitude of counsellors there is wisdom," and in a variety of notes from the journals of different operators, the profession may arrive at greater perfection, these notes, from my journal, are given for what they are worth.

Up to the present time, I have removed the pulp from the crown and roots of over eighty teeth—molars, incisors, cuspids, and bicuspid, without reference to the class of tooth, or the position of the decay.

In these operations I have ever, I do still, coincide with Dr. Dunning, of New York, (who kindly offered, some years ago, to explain to me, by letter, his method of operating,) that, if we can get a patient to submit, the best plan is to kill the nerve mechanically, without any chemical agent whatever, and then remove it. But I must confess to having had but two patients thus far, who have submitted; one proved a most perfect operation; the other, numbered B, failed, but from causes beyond the control of any operator; and, as a case of much interest, will be described hereafter.

Wherever opportunities have offered, I have carefully examined these teeth, and, with the exceptions which I shall mention, have been satisfied with their appearance, and with the success and usefulness of the operations. Only one case has come under my observation where the slight abscess formed was sufficient to overcome the power of the absorbing vessels to

remove the pus. In this case a slight discharge finds its way through the gum occasionally, and the tooth is a little "sore;" and from this case I date my abandoning the use of all steel instruments for entering the finer channels of the roots, either for plugging or for removing the nerve. This was one of my first cases; I had the misfortune to break off a small steel probe in one of the roots: though made of the best steel, annealed in a gun-barrel, I found them likely to break. Steel I have, therefore, laid aside, for plainer operations, requiring more strength, and substituted gold beards and gold pluggers, made of well annealed gold, of eighteen carats fine, drawn through a plate to the desired size, and then flattened with a hammer, if the nerve channel is flattened, as in the bicuspidati, and often in the molars. I have a plate that will draw a wire exceedingly fine, then with a hammer I can reduce it to a hair's thickness one way, and with a file it can be made quite round, if necessary; exceedingly stiff, as this wire is, it is yet sufficiently ductile, and tenacious to a remarkable degree, and can be made to pass even through the finest apex of a root, and give the operator no fear of being broken. Who can say this of steel? Another article that I have discarded is kreosote; disgusting alike to the operator and patient, it is unnecessary in operations of this or any kind, that I have to perform; and finding it also destructive to the olfactory nerves, it has been for a long time discarded from my laboratory. At present I am using gums to hold up my arsenious acid, with a little fragrant oil to keep it soft. In place of kreosote I now use oil cajuput and aconite—the last is a fine thing to act upon an exposed irritated nerve. My course of destroying the pulp is much like that pursued by Drs. White and Arthur, except that I do not do it so rapidly, often making half a dozen applications ere I have removed the whole pulp to the apex of the fangs. After I have destroyed and removed the main pulp laying in the crown, and perhaps half down the roots, I introduce a very fine gold bearded probe, with the most minute particle of cotton wound on its point, which is just moistened in the weak preparation that I use; I carry this down until I touch the fine fibres of the nerve remaining; cut it off at the edge of the external orifice of the tooth, and leave it twenty-four hours, protected by gutta percha; it seldom fails to act on that minute fibre of nerve



left at the point of the root, sufficiently for its entire removal. This leaving a small piece at the apex, either dead or alive, is the rock upon which this operation often fails. In case C, nervous sanguine temperament, where I plugged the first inferior molar, right side, and also second inferior bicuspid, left side, posteriorly. The latter was one of the teeth that I mentioned as extracted after a thorough remedial course, leeching, amongst other remedies, having been resorted to. I took the tooth out, and found the trouble proceeded from a delicate hair-like fibre of nerve at its apex, of a fourth of an inch in length, which, pressed upon by the gold, if alive or partially dead, responded to the action of a foreign body by throwing back its irritation upon the periosteum, in the mouth of a patient peculiarly alive to slight irritation, and a general sympathy of that side of the face was the result. The action of this small portion of the pulp, when converted into pus, (as it most generally is,) in an irritable constitution, is sure to show itself in more or less periosteal inflammation, and often in abscess of the membrane. After removing the pulp, my course is never to plug immediately: there is more or less discharge of coagulum lymph following this, as all other wounds, which, if shut up, must cause more or less irritation. The bleeding and discharging vessels, too, if left to themselves, will soon heal; but, if by chance any foreign body is immediately placed in contact, it needs no philosopher to prognosticate the result. After allowing a few days, more or less, to intervene, I generally take a small piece of fine cotton, such as is used by hatters, (it is in long locks, and can be spun into a fine, yet tenacious string,) and with this I plug the root thoroughly—after carefully “wiping” and drying it;—catching hold of the external end of this thread it can be easily drawn out. If this plug remains a couple of days, giving no uneasiness, it is fair to infer that gold may be substituted; but a gold plug once there, no relief can be afforded the tooth internally, if inflammation follow. In teeth whose nerves have already died, I do not use the “mop,” but this same thread of cotton, carried down, layer after layer, until the channel is full, and then drawn out. A mop, or swab, on the end of a probe, forms a regular pump-piston, without a valve, driving the pus and foreign bodies (minute though they be) down, and even through the apex, upon

the already irritated periosteal membrane, and again drawing forcibly upon it, by its "suction" power, on removing it. In my pluggers, I am careful to have them perfectly smooth, as the slightest notch, or even scratch, will catch the gold and pull it out; even a slight enlargement at the point would act like the swabbing-rod of a rifle, carry down the rag or buckskin, and draw it out again. All my wires and probes I put into a little handle, like those for holding wire to file, only finer and more delicate.

*Case A.*—A young lady, aged about 24, nervo-sanguine, combined with bilious temperament—the latter predominating—operated on three teeth, where lining membrane was exposed: 1st was first inferior bicuspid, left side; in a week, had violent periostitis. I should have mentioned great irritability of gums, teeth bad and irregular, many plugged, and altogether a case not pleasant to operate upon. In addition to an irritable constitution, was combined a predisposition of the blood to the head, overcharging all the blood-vessels, and of course overloading the surrounding vessels of a tooth undergoing an irritating operation. I disliked this operation from the first, and at the result, urged the removal of the tooth; the abscess formed, discharging much pus—she would not consent. Not long after, the second superior bicuspid of the left side requiring the same operation, pointing out all the prospects of a failure, and declining the operation, I was yet forced to go on with it; this resulted like the other, except with less violence. After this, the left superior lateral incisor, which had been severely filed, and lay tightly against the central incisor, being decayed, it was necessary to press them apart, this was done as gently as possible; to file would have taken nearly the remainder of the tooth; its nerve being exposed, my patient insisted on my operating as before. Here, more than in any other of the previous operations, I saw the result of this superabundance of blood in the vessels of the head. I never saw the internal blood-vessels of a tooth bleed so much. Soon after plugging, leeches were applied to this as to the others; they afforded relief for a month, then a slight cold taken, brought on a greater supply of blood than usual to the head, and another abscess was the result; the tooth was immediately crowded upon the cuspid, where it has remained; these teeth are all very serviceable to



her, discharging very little. Another tooth that I commenced operating upon, (the right inferior bicuspid,) but left open during my absence, formed an alveolar abscess like the others. I would not have operated in *this* case could I have avoided it. I never would, in a similar case, operate upon mouths of this class when placed in constitutions of this temperament and tendency, when *such* an operation becomes necessary.

*Cases B.*—In both these operations, (a gentleman of nineteen years of age,) I destroyed the pulp without any applications. Mr. F. had a superior left lateral incisor; by great fortitude I killed the nerve to its point and removed it; plugged in four days after, and look upon it as one of my best operations. Mr. T. had a superior left cuspid removed in the same way—the opening at apex so large as to require great caution—plugged successfully, but terminating, my condensing of it, started the whole plug one-twentieth of an inch; supposing I had only left this vacancy between my gold and the apex, I was fearful of the result—two hours started the surrounding vessels, inflammation became very violent; the thorough and vigorous course adopted, leeches not omitted, affording no relief, I took the tooth out, and found four small outlets, independent of the central one, but descending and uniting with the central nerve one-fourth of an inch from its apex. In this case had I used arsenic, it is possible the tooth might have been saved, for the slight discharge of pus emanating from these small fibrous nerves *might* have been taken up by the absorbing vessels and no one have been the wiser. Anomalous and isolated as this case is, I shall still prefer the death of a nerve by mechanical means, to avoid injury to the periosteum when it can be done, or a partial destruction by chemical means and finishing it to the point of the root mechanically, when the former course cannot be pursued.

*Case D.*, only presents a tooth, with its nerve dead, in the mouth of a young lady, eighteen years of age—the left superior lateral incisor—without my being able to trace *any* cause for its loss. In no part of the tooth was the enamel imperfect, not the slightest sign of decay; yet from a loss of the vital expression, I knew at once a dead nerve lay suppurating within it—entering on its palatine surface, I removed all the pus and plugged the root and crown. I could get no satisfactory data upon which to found the cause of the death of its nerve.

*Cases E, No. 1.*—Young lady, aged twenty years, nervous, sanguine temperament, great tendency to congestion of the vessels of the head, pain in destroying pulp, pain in removing the upper parts, (the second right superior bicuspid,) kept my application in longer than ordered when applied on the end of a probe, though so minute as to be almost harmless in another person's tooth, the absorbents distributed a little in the investing membrane—plugging with cotton was followed immediately by inflammation of investing membrane—removing the cotton and leeching, reduced this; but finding a discharge necessary, I plugged, carrying a tube into the roots and out through the centre of the plug. This winter I may succeed in thoroughly plugging the roots. *No. 2,* two superior lateral incisors—married lady, aged twenty-five years, nervous, sanguine temperament, combined with bilious—left tooth thoroughly successful, right one could only operate upon with a gold tube through my plug, nerves partially killed by previous plugs pressing upon them, made no application to either.

*Cases F.*—Nerves destroyed by pressure of plugs upon them, or rather upon inflamed bone; remarked a deposite of dark discoloring matter, nearly dark as ink, too near the antagonising point, and too extensive to be in the channel of the nerve—the porous condition of comparatively sound teeth that will enable them to receive a deposit of this kind in twenty-four hours, (as in another case, whilst my application was in the tooth, a similar deposit took place in that short time,) speaks loudly of the efficacy of Dr. Dwinelle's discovery of bleaching the black, disfiguring teeth, that so often fall in our hands. I have tried it in a few instances with some success, enough to spur me on, never doubting but that I shall be repaid for my trouble, in the satisfaction of seeing many valuable teeth restored nearly or quite to their original beauty. I have been prevented from plugging a root after raising its crown nearly to its original color—the irritation, and perhaps a cold, has brought on a discharge of pus from its sac, and in a night the pus has turned it back dark and dead. I now plug the root at least a little way to prevent the ingress of pus under any circumstances, and then go on with my experiments. If I cannot raise it sufficiently light, with a small brush, or otherwise, I give the cavity a thorough coating



of some white paste, letting it dry; it is much better than paper, and can be colored pink if necessary, and is no injury; provided, the plug excludes all moisture.

*Case G.*—Young lady, of twenty-eight or twenty-nine years; right superior lateral incisor, destroyed pulp with usual preparation, but could not enter root; a fine hair-sized probe would slide up a little and give pain; I dissected the flap of gum on the labial side of the neck to the alveola process, entered the tooth there with a large drill, found the pulp of usual size and not dead: started down a piece of ossified pulp, which at once gave me free ingress into the root through the approximal surface of the crown: the gum has almost entirely healed to its usual place, covering the plug, which, of course, I put into its neck. Had I this to do over again, I should fit in a bit of bone with a screw tap, as much more likely to have the gum take kindly to it. In operating upon persons of fifty years of age, I find the main pulp of the crown a solid bone, often harder than the old bone of the tooth, and in an extraction not long ago, for a young man of thirty, requiring the splitting of the roots of the right first lower molar, disease had stimulated a deposit of bone so excessive, that the whole main pulp in the crown was a complete solid bone, yet loose from the tooth and dropping readily into the hand. In two or three cases I have excised the nerves of the front teeth—in one case satisfactorily—but two years developed a small abscess, though giving no pain; at present I am not inclined to favor the operation.

During the writing of this article, I have been operating upon a lady who, ten or fifteen years ago, had the second right superior bicuspid extracted, the nerve removed, and the tooth plugged and returned to its socket by Dr. Gardette, of Philadelphia. The patient and doctor took great pains to insure success, and the tooth is now of much service, though a small abscess has formed and the gums have partly receded from the neck, and the tooth has darkened in shade; on the whole, it looks far better than many teeth that have been plugged over dead nerves.

In conclusion, I will say, if the opinion of several gentlemen is favorable, to whom I have sent a specimen of a temporary stopping, I shall offer the constituents to the profession. I find it valuable, hardening almost instantly, nearly as hard as bone; a

perfect non-conductor of heat or cold, and as far as I have been able to test it, as impervious to moisture or to any of the juices of the mouth as the bone itself.

Washington, D. C., November, 1851.

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For the Dental News Letter.

### DENTAL PERIOSTITIS AND NECROSIS, CAUSED BY A CROWDED CONDITION OF THE TEETH.

BY C. T. CUSHMAN.

Inflammation and suppuration of the investing membrane of a sound tooth, and even a total suspension of its internal circulation, from causes other than mechanical violence, mercury, or sickness, I believe, have not been before considered.

But, I have met with several cases in my practice, of a high stage of *periostitis*, and even of *necrosis* of the tooth, which manifestly proceeded from no other cause than great *pressure of irregular teeth upon each other*, in a maxilla too contracted to admit them in a proper position. In illustration, I offer the following:

CASE 1.—Miss H., aet. 11, of sangui-nervous temperament, with large, discolored teeth, fourteen developed in each maxilla, and an irregular denture, presented herself for the purpose of having the left superior cuspid tooth brought into line. It had recently appeared high up, entirely in front of the alveolar circle, and pointing obliquely forward, at an angle of about forty degrees; its crown rested upon, and diagonally *across*, the root of the lateral incisor. There was no possible room for it to come within the circle; its place being already occupied by the contiguous teeth, and *more* than occupied; for the bicuspid were crowded outside of the line; the lateral incisor forced a little within, and the centrals *lapped* over each other.

On the right side, the cuspidatus also appeared above and outside of the circle, the point of the crown resting upon the posterior edge of the lateral incisor, but in a more perpendicular position. To make room for this, the first bicuspid had been extracted some time previously;—a very judicious treatment, and such plan was now proposed to me to remedy *this* case, on the left side. The practice is one which I approve, as immeasurably



preferable to another that is too prevalent among many physicians, and dentists, who are perhaps generally governed by the wishes of parents and the patients themselves, all of whom are proverbially hostile to "tushes," and who, probably, do not often witness or realize the subsequent effects of the loss and absence of the cuspidati. The effect is a disfiguring *flatness* of the mouth, which not only mars its symmetry, but materially changes the anatomical and physiological *expression*. So important are these teeth, whose great length and thickness give such essential rotundity and *strength* to the arch, of which they may aptly be regarded as the *corner-stones*. I, therefore, always aim to retain them in the mouth, if possible, whatever their abnormal position; and have succeeded in like cases, in reducing them, in a short time, by first extracting one of the small grinders. But if they give good promise of integrity, and should the six-year-old grinder be defective—as it is very apt to be—and very difficult to save permanently, it would be judicious to sacrifice *that* to obtain space, preparatory to further operations.

I was just about to commence on this system—as I presume most judicious practitioners would have done—when my attention was attracted to a glairy appearance and slight symptoms of inflammation of the mucous over the foramen of the *lateral incisor*.

From whence did this proceed? The lateral was *sound*, and so, with slight exception, the left central. *No pain or uneasiness had ever been experienced* in any of the front teeth, nor was she aware of the *fistula*, which I soon found by means of a fine probe. And although they were of medium *softness* in their degree of organization, no one of the teeth showed any *opacity*, or change, which could be "readily detected by the most casual observer," or by a more practical eye.

I, therefore, had recourse to a very certain method of determining from which tooth—for certainly it was one of them—proceeded the fistula. I successively sounded, or struck, each one lightly on the cutting edge with the ivory handle of an instrument, at the same time particularly directing the mind of the patient to the different and peculiar degrees of sensation thus produced.

The *lateral incisor* being most sensibly affected by this test, I

readily concluded that it was a case of periostitis, induced by the pressure on its root of the irregular cuspidatus crown. Such being my conviction, I finally, by much persuasion, obtained consent to extract it instead of any other. My diagnosis was confirmed by the appearance which its root presented. The periosteum was in a high state of inflammation; towards the apex of the root, it was covered with lymph. The foramen was much enlarged, and surrounding it was a *sac* as large as a squirrel-shot.

Nearly eight months elapsed before I saw the mouth again, when the cuspidatus was much extended downward, the space made by the loss of the incisor was about half filled by it, and there was good promise of its soon occupying it entirely.

CASE 2.—Miss A., aet. 13, nervous temperament, with very large teeth—a family characteristic—and of a degree of density corresponding to Case 1, had irregular denture, from the great disparity between their size and that of the maxillary circle. The superior cuspidatus, on the right side, had made its appearance entirely without the circle, and been suffered to grow down in front of the other teeth. It had been extracted some months before I saw her.

She was now presented to me for the purpose of having the corresponding one extracted from the left side, which appeared precisely similar. As the precedence of its mate had rendered the retention of this one out of the question, I was compelled to comply. On extracting it, the periosteum presented about the same *diseased appearance as the foregoing case*, excepting that the sac was not so large, and apparently of not so long existence. In this case, there had been no pain felt in the tooth, or disease suspected, either by the patient or *myself*. There was no fistula. The most experienced eye could not have discovered any abnormal appearance about the crown of the tooth. The root was much curved backward.

I assign as a cause for the *periostitis* in this case, the pressure upon the root, which was kept up by the advancing molars.

CASE 3.—Miss A., same subject as the foregoing in Case 2, *ten months after*, was presented for the purpose of having the *inferior cuspidatus* of the right side extracted; because this tooth was more prominent than its coadjutors, and the maxilla crowded.



I was quite unwilling to comply in this instance, for its mate was standing. I, therefore, sought for a defective one in its rear. The six-year-old grinder, or first molar, showed such defects in its organization, as presaged for it a comparatively short life. So, after explaining the case, I obtained reluctant permission to extract that, and subsequently to attempt to reduce the cuspidatus into line, which I did not doubt could be effected. The molar was closely *crowded* on each side, and with difficulty I extracted it. The periosteum of its roots presented a high degree of *inflammation* and vascular suffusion; and was evidently tending speedily towards suppuration.

No complaint had been made of this tooth; there were no *external* indications of a *diseased* condition. As it existed, however, without other apparent cause, I attributed it, with good reason, as I think, to alveolar *pressure*.

CASE 4.—Miss S., aet. 14, nervo-billious temperament, with full maxillary circle, clear, handsome teeth, of more than medium density, generally sound and regular, with the exception of the second inferior bicuspid on the right side. This stood *leaning* so much *inward*—probably caused by a too long retention of the temporary molar—was so crowded between the contiguous teeth as to make its restoration to perpendicularity doubtful. And being withal *slightly* decayed on its postero-buccal surface, we determined upon its extraction. The root was found to be curved in a posterior direction, and its periosteum presented an active stage of *inflammation*, particularly toward the apex, and was manifestly tending to suppuration. To a like cause, as in the foregoing cases, do I attribute the diseased condition of the tooth in this.

I trust that I have now established the facts that *periostitis* and *necrosis* of a tooth may result from the undue pressure of a crowded maxilla; that practical benefits may result to all concerned from a due consideration thereof; that it may help us to prognosticate *carefully*, *judiciously*, and *correctly*, in regard to irregular teeth, and that our practical treatment may be governed accordingly.

I have seen cases of *necrosis* from still other causes than I have seen enumerated, which may form the subject of a future paper.

For the Dental News Letter.

## DOUBLE ATMOSPHERIC PLATES AND PUFFING.

Messrs. JONES, WHITE &amp; McCURDY :

*Gentlemen*—Some years since, I was residing in one of our Western cities, a long distance from this, awaiting with anxious expectation, (as most young practitioners do,) the arrival at my office of sufficient number of patients to give me the “wherewith” to pay expenses. While thus situated, my patience was often exhausted with “hope deferred.” I was, doubtless, possessed of the usual amount of envy for those around me who had, by long and patient application, acquired a remunerating practice. At this juncture of affairs, my eyes caught a flaming “puff” in one of the daily papers, of a gentleman of the profession, (justly entitled to much praise for his persevering industry and patient research,) whose sign hung within a stone’s throw of my own, claiming originality of invention in the use of double atmospheric plates. At that time they had been in use some two years.

The editor says, “We were shown, on Saturday, a set of teeth, inserted on an entire new principle. They are retained in the mouth without the usual paraphernalia of springs and clasps.” Then goes on to describe a double atmospheric plate, and winds up by saying, “this wonderful piece of mechanism, was got up by Dr. C. C. C., of this city.” This said Dr. wore an M. D. to his name, and report said used to handle it to the detriment of those who did not. Moreover, it was said to have been conferred by a Board of Physicians, unauthorized and unknown as having any right to confer said degree, that being almost, if not quite, their only act of the kind.

Of the truth of this last, I know nothing ; but this I do know, the combination of circumstances set my pen at work, producing the following reply, which, if you think will pay for the trouble, you may give to your readers.

’Tis strange that men of common sense,  
Should gain repute at such expense,  
Yet so it is, they’ll court and fawn  
To get an editorial quill in pawn,  
That thus it may, with type and ink,  
Add to their fame another link.  
’Tis thus some men get dubb’d M. D.  
By courting mushroom faculty,



Who rise and bloom but for a day,  
 Then sink to naught 'neath science ray.  
 I wonder such consummate skill  
 Should need an editorial quill  
 To raise its atmospheric pressure,  
 With "two gold plates and little fissure,"  
 And make men think that ne'er before  
 Has dentist made, or patient wore,  
 Teeth that so much art display  
 As came to light "on Saturday."  
 Each man, well skilled in his profession,  
 Can safely judge of operation;  
 But setting teeth, and setting type,  
 Are as much like each, as soup and tripe—  
 Things new to *us*, each day occur,  
 Which many men have seen before—  
 Again, they oft appear quite new,  
 Simply because they're known to few.  
 What, though I may ne'er have seen  
 A sunny day at Gretna Green,  
 Yet, is it fair that I should say  
 'There was never such a day?  
 Let every editorial puff  
 Say "well done," is it not enough?  
 Men always should, from *facts possess'd*,  
 Make up their minds and leave the rest,  
 Not knowing what has perchance been done  
 By other mortals 'neath the sun.  
 Some assume to have discerned  
 What men before *them* never learned,  
 That teeth can be set and made to stay,  
 "Without the usual paraphernalia  
 Of springs and clasps." They ought to know  
 They've thus been set some years ago,  
 And that each well-skilled dentist  
 Can do as well as their apprentic'd,  
 (To say the least,) in setting teeth  
 By pressure atmospheric. But Lethe  
 To further rhyme be given.  
 Let swelling boasters climb to Heaven,  
 We'll meet them in the atmosphere,  
 And with it press the hemisphere  
 Of double gold as close as they.  
 One thing more we have to say,  
 To yield the palm, or grant the prize,  
 Let judges have both teeth and eyes.

I. B. B.

## AN ADDRESS,

*Read before the Pennsylvania Association of Surgeon Dentists, on the principles of setting Artificial Teeth.*—By J. D. WHITE, M. D., D. D. S.

MR. PRESIDENT AND GENTLEMEN:—That great advancement has been made, within the last few years, in the various departments of our now noble art, all are fully aware, but, that some branches have, in that time more than kept pace with others, will, I doubt not, appear obvious; also, when I direct the attention of the intelligent dentist to the fact that those practitioners who were quite perfect in the art of *plugging teeth* betrayed the most woful deficiencies in the art of *setting teeth*. It is interesting in the extreme, to mark the gradations of improvement in the development of methods and even principles employed during the last half century in supplying artificial dentures. To contrast the earlier specimens with the later, which are all the time falling into our hands, as each successive change was made, from the rude and clumsy ivory or Hippopotamus blocks, merely marked by faintly engraved lines to indicate the number of teeth, as if it were only intended to establish some idea of their cost, down to the present apparent revelations of nature, that, when they are in close contact, almost defy the practiced eye to detect the real from the artificial, how faint and imperfect must have been the earlier impressions of the first inventors; and yet, each additional improvement that experience dictated, we doubt not, appeared to their minds to deserve the name of perfection!

First. After the pivoting method, which is still in use, the ligatures, which every housewife resorts to when there is a breach of “continuity” any where, was resorted to by the dentist.

Secondly. The use of metallic bands were and still are used to a great extent. Thirdly. That of *adjustment* or fitting a piece of work to the gums and adjoining teeth with accuracy, and so constructing them that the patient could manage them habitually with the tongue and lips; and, Fourthly. That of atmospheric pressure, applied with various modifications and constructions of plates. With reference to the first method named, it is only necessary to state that it has gone out of existence, to dismiss a further consideration of the subject. With regard to the second, however, that of the use of bands and wires, or narrow bands or wide ones, as the case may be. There seems to be some difference



of opinion among operators, which variety is best suited as a general rule, when either are deemed advisable. Some contend that the wide bands are best, because they will make a more equal pressure over a greater surface of the tooth at the same time, than narrow bands or wire. If pressure was at all under any circumstances an exciting cause of decay, or generally, then the wide bands might be considered preferable. Those observers who consider *lateral pressure* of the teeth, one against another, an exciting cause of decay, would most likely employ the wide bands; but since the *chemical* action of external agents has been resorted to in order to more satisfactorily explain the more immediate causes of decay, the argument in favor of the wide bands loses its force, and they are decidedly pernicious, inasmuch as they (the wide bands) acting as one tooth does to another to hold the sediments of the mouth between them, by their lateral contact, and favoring the prolonged lodgement of various kinds of food and the saliva, until they decompose or become vitiated, and thus excite decay. A wide band acts to a tooth over the whole surface it covers precisely as one tooth does to another; and if it is injurious for teeth to touch each other, then is it also injurious for bands to come in contact with the teeth. The smaller the surface, therefore, of the tooth, impinged upon by a band, or wire, the less liability to do injury. If pressure could be regarded at all as an immediate cause of decay, why do not the more prominent portions of the teeth, that come in contact with each other in the opposite jaws, decay first. It is a fact that they do wear, but not decay. I was, for a time, of opinion that wide bands were best, but have long since abandoned such notion, and therefore prefer wires or narrow bands where there is a prospect of exciting decay.

It would appear from a "Biographical Notice of the late James Gardette, Surgeon Dentist of Philadelphia, by Emile B. Gardette, M. D., Dentist," that he was the first dentist who substituted the use of elastic gold bands or braces in the place of ligatures of silk or fine gold wire, for securing artificial teeth when attached to the living ones." It would seem that it was, like many more modified methods, to be more of a change than an improvement from the wire or narrow bands, properly applied.

Thirdly. That of *adjustment* or of fitting a piece of work to the gums accurately, so that by pressing the jaws together the

air and moisture will be forced out as much as possible, and in that manner obtain a degree of *cohesion* from a nice adaptation of parts. Constructing the piece of work, so that the adjacent parts, the tongue and the lips, if it be in the case of an entire upper, or upper and lower set of teeth, and to, and partially around the adjacent teeth, if it be in a case where there is yet some remaining teeth in the mouth. It would seem from authors, that this method of supplying teeth has been practised to a great extent for a long time, and many have mistaken it for atmospheric pressure. Dr. Solyman Brown remarks in "a treatise on Mechanical Dentistry," in Vol. II., No. 4, of the American Journal and Library of Dental Science, "Inasmuch as the pieces which I am now describing, and those which, by some, have been called 'Suction Plates,' and by others are said to be retained in position by *atmospheric pressure*, I deem it proper in this place to express an opinion on the subject, resulting not only from conversation with distinguished dentists but from years of experience and observation, during which I have had occasion to inspect pieces of this description, constructed by some of the most distinguished artists of both hemispheres. And result of my inquiry and observation has been, that few pieces of this kind are fixed firmly upon the gum, and used successfully for purposes of mastication, by mere suction or atmospheric pressure, without any aid from the tongue, lips, cheeks, and antagonizing jaws." He further observes that, "The manner in which the surrounding parts operate to secure such a plate in *situ*, are too well known to need any illustration, even to the youngest student of our art." Another author, S. Spooner, M. D., Dentist, in a work, entitled "Guide to Sound Teeth," New York, 1838, remarks, when speaking of "Suction Cases," that "they are exciting considerable interest in the public mind from the novelty of them, and the advertisements of some dentists, who would have the public believe themselves the inventors of the '*important* discovery.' Suction cases, especially cases made with an ivory base, carved so as to fit the gum perfectly, have been used to my knowledge more than twenty years." "This method of inserting teeth has been much more extensively employed in England, and on the continent, especially in Germany, than in this country.

It would seem from the above, that teeth have been retained



in the mouth without springs or clasps almost ever since ivory and Hippopotamus tusk have been in use. It would be a difficult task to ascertain, to any degree of certainty, who was the happy inventor of this improved method of inserting teeth. In a pamphlet, which I have before me, it is claimed for the late Mr. James Gardette, Surgeon Dentist of Philadelphia, in a *biographical notice* of him by his son, E. B. Gardette, M. D., Dentist. The writer asserts that the late "Mr. Gardette was the first to apply the principle of *suction* or *atmospheric pressure* for the support of entire sets of artificial teeth, dispensing with the use of spiral springs and the endless contrivances then in use, much to the inconvenience of those who wore them." The biographer remarks, that it is a well-authenticated fact, that Mr. Gardette successfully maintained sets of artificial teeth for the upper jaws, on the principle of atmospheric pressure, as early as 1800. He relates the following anecdote of the chance which led to this important discovery:

"He had furnished, for the second time, an entire set of upper teeth, (enameled Hippopotamus,) for Mrs. M'C., and owing to the short time the first set had lasted, under the action of the saliva, he suggested that this set should be left much heavier. In order that the tongue should become accustomed to this increased bulk, necessarily contracting the limits of its free movements, the lady was desired to keep the new piece in her mouth as much as possible, during a few weeks, but not expecting her to use it for purposes of mastication or speech, until the usual springs should be attached to it. Mr. G. promised, at the end of the period named, to call and arrange the piece for permanent use." "It was then still the custom for the dentist to attend at the houses of his patients, and a busy season caused months instead of weeks to elapse, when Mr. Gardette called again; with an apology for neglect, his pliers and springs ready, he requested Mrs. M'C. to bring the artificial pieces. She replied, 'I have them in my mouth,' much to the astonishment of her dentist, with whom she had been conversing with her usual facility. She stated at first they were a little troublesome, but she had become accustomed to them now, and they answered every purpose as well *without* as *with* springs, and she was glad to dispense with them. The principle upon which the artificial piece thus adhered to the gum,

at once suggested itself to his mind, and suction or atmospheric pressure, was henceforth depended upon in numerous cases of the same kind." Now this seems to me to be purely a case of the lady accommodating herself to new circumstances, or, in other words, a well-adapted piece of work to the gum, and so constructed as to be acted upon by the tongue and lips so as to keep it in place, and cannot be regarded in any other light than that of *adjustment*. These cases are constantly coming under the observation of dentists. A lady called upon me, ten years ago, to get a set of upper teeth, and requested that I should so construct them that they could be worn by atmospheric pressure. I remarked, that I did not think her mouth was suited to what I then regarded as necessary to constitute a good case of atmospheric pressure, but she remarked that her sister was wearing an entire upper set by atmospheric pressure, and had no trouble with them: that they had had springs at first, but had given so much trouble that she broke off the springs, and had worn them since with perfect comfort and usefulness. I then observed, that I would like to see her sister, as I might learn from her set how to construct her own. The sister accordingly called, and very willingly opened her mouth to show how well her teeth answered; but, at the same time, I observed the point of her tongue thrust up against the plate. I requested the lady to remove the tongue so that I could see how wide the plate was, but she could not of her own will take the tongue away. When she would take the tongue away she would close the mouth. I then told her I could learn nothing in that way, she must open the mouth and keep the tongue away from the teeth. She replied, that if she took the tongue away the teeth would fall down!!! The plate was only half an inch wide and very illy adapted to the gum, but habit had accomplished all; and this is the way that a large majority retain their teeth in the mouth, whilst, if they depended upon the pressure of the air, they would not support their own weight; and this is the manner in which sets of teeth have been kept in the mouth, until the cavity or chamber plates came into use. Mr. John Gray, Dentist, on the teeth, London, 1842, observes, when speaking of the atmospheric pressure, or suction, as it is usually called, that, "On my principle of supplying a deficiency of the teeth, the artificial piece being fitted close to the



gum, the natural moisture of the mouth is affected by capillary attraction, the moment the piece is introduced into its place, and the moisture being drawn in, between the piece and the gum, the intervening air is driven out, and being thus excluded, the atmosphere acts with a force in proportion to the extent of the surfaces in contact in keeping the artificial piece in its place." The author further remarks, "and being fitted in the manner just described, adhering to the *gum only*, affords support to the remaining teeth, which are let into grooves, accurately formed in the piece for their reception." Is it not obvious that this author, like most others, is mistaken in the principle force concerned in retaining the artificial teeth in the mouth, when no cavity plate is employed? Would not the adjacent teeth, to which the artificial piece is fitted, furnish as much support, and even more, as they have hold in the gum to the artificial piece, as they receive from it. It is obvious that the true explanations are yet to be given how teeth are worn in many instances. I do not see that the claim of Mr. Gardette, at this late day, fifty years after its alleged discovery, is any better "authenticated" than the "thousand and one" that have, from time to time, laid claim to what they mistook for the atmospheric pressure principle, through the public prints and in advertisements. If discoverers were to come out at once, boldly, and announce their claims to any new method or principle, that they might have had the good fortune first to apply, there would not be so much violent disputation about who were the rightful claimants of new inventions, or improvements, as often marks such controversies. The fitting of two plain surfaces together, say the gum and a plate of ivory or gold, by which a degree of atmospheric pressure is obtained, does not constitute in the mouth the only means by which teeth are retained, as is justly observed by Dr. Solyman Brown, in his excellent articles upon Mechanical Dentistry, but the adaptation of the block, or row of teeth, to the lips and tongue, or adjacent teeth.

I have some specimens in my possession, made of Hippopotamus and ivory, the history of which is somewhat interesting. One of them was made by one of the most distinguishod practitioners in this city, about thirty years ago, and was worn without springs, but a single glance at it would satisfy any one that

it could not furnish much, if any, atmospheric pressure. After the decease of the patient, who wore it over ten years, another member of the family wore the same set until their decease. Is it probable that atmospheric pressure sustained this piece of work through this long period of service? It gives evidence of no superior skill, and yet it was actually made by one who, we are told by a late writer, was possessed of "superior skill," and was "at all times considered as worthy of imitation," "and was even sought after with that view and for that purpose."

Another set is mounted on silver plate, and was intended to be worn with springs attached to a small plate resting on the lower jaw. This set was not so successful as the one first named, although it was also made by one of the most *eminent* practitioners of the past century. It also bears no marks of extraordinary skill.

Another set was made by the same operator, and is a strange admixture of platina, gold and *soft solder*. It likewise lacks mechanical skill, or evidence of any improvement in the art.

Contrast those with the specimens of the present day, even from what are called the lower order of dentists, and what conclusion would we come to? Are the specimens of the present day "imitations" of the former?

If this was the state of the mechanical department of the dental art, in those days, among those who designed and constructed them, what must have been the condition of the more scientific departments, before the microscope revealed the true anatomical structure of the teeth and tissues of the mouth, and which anatomical knowledge must first be well understood, or all attempt at the treatment of disease must be empirical. Have not the Hunterian views of the structure, Physiology, and Pathological conditions of the teeth, which prevailed from the time this eminent author wrote, up to within the last few years, been shattered to their bases by more minute observations, than was resorted to in former times, and given a better understanding of the true principles of the treatment of the teeth in all the diseases to which they are liable?

Fourthly. That of *atmospheric pressure* as obtained by the *cavity* or *chamber plates*. If there is any merit in any method of invoking atmospheric pressure for our aid in supplying artifi-



cial teeth, it is in this class of plates; the mere pressing of two well-adapted surfaces together in the mouth, is not sufficient to obtain the full effects of atmospheric pressure. When mechanical pressure is unequally made upon a plate well-fitted to the gum, it would yield from the elasticity of the gum, keep up a constant admission of air, and consequently loss of pressure. Again, the cavity gives the advantage of a column of air in the centre of the plate upon which the effect of suction can be made to obtain a *vacuum* between the gum and plate, as there can be no atmospheric pressure without a vacuum: suction is the means of obtaining a vacuum. Suction is one thing, and atmospheric pressure another. Try the experiment, for instance, of causing a piece of silver plate to adhere as firmly to the hand as a thimble of the same extent of surface, press the air out from under the plate, and exhaust it from under the thimble, and see what the result of your experiment will be; the least lateral pressure will displace the plate, and will not affect the thimble. The rolling of the plate also, on the yielding surface of the gum, will loosen the edge of the plate somewhere, and the moment the air enters around the edge of the plate, it rushes with rapidity across the whole surface, whilst the thimble, impinging on its edges *only*, has the whole of the pressure to keep them down and prevent the commencement of the ingress of the air. Again, the tissue in the middle of the plate acts as a fulcrum when pressure is made on one side to elevate and loosen the other; not so with the cupping-glass, or with the thimble. I am well aware, that two pieces of metal, fitted together air-tight, may be regarded as capable of sustaining as great a force as if the centres were hollow and the edges only impinging; and, also, that if two pieces of glass are pressed together, they cannot be forced directly apart, but a very feeble lateral pressure will displace them, or if the edge is raised the least, the air rushes in, and they are readily separated. But it must be remembered, that it is direct force only that can be applied to separate such unyielding surfaces; the rocking motion cannot be produced to displace them, as in case of an unyielding plate and an elastic gum. Cavity or chamber plates, it would seem, have been in use for a long time, but the credit of first bringing them before the profession seems to belong to a Mr. Gilbert, of New Haven, and who, I believe, is not a

dentist. The attention of the Pennsylvania Association of Dental Surgeons was directed to it in 1848, when a committee was appointed, and reported upon it in very favorable terms, and I believe it is now in pretty general use; for my own part, I could not do without it, and satisfy the wants of my patients; for I do not find any of them willing to wear a set of teeth in the mouth, for several weeks without attempting to "masticate with them or speak," as we are informed that they did in former times, when the first operations were attempted by atmospheric pressure. It is common for an upper plate to be fixed so firmly to the gum the first moment of its application that it cannot be removed by direct force. It is not uncommon for patients to return now-a-days, if they cannot masticate well and speak fluently in twenty-four hours, and find fault that the case will not answer, even if there is fifteen pounds pressure on the plate. A short time after the report of the Pennsylvania Association, there were a number of claimants out in the journals and otherwise, for the credit of first applying the cavity plate, but differently constructed, and some a number of cavities. The committee regarded the central cavity as a kind of "neutral ground," or reservoir, as well for the air as the elasticity of the gum. The writer remarked, in an article on the human voice, which appeared in the July number of Dental News Letter, 1851, in referring to the central cavity-plate, that, in bringing the jaws firmly together, the gum is forced into this chamber to some extent and in so doing displaces the air and obtains an air-tight joint around its margin, similar to forcing a cork into a bottle, and secures complete atmospheric pressure equal to the surface; then upon withdrawing the pressure of the jaws, the elasticity of the gum upon which the plate impinges, raises the plate away from the gum opposite the chamber and increases the atmospheric pressure, and this action, kept up constantly, and on all sides alike, the pressure is maintained without the act of suction on the part of the patient. The improvements in all the departments of our art are so numerous and apparent, that it would be a waste of time to name them here, and there was a time when any small improvement or modification was made or suggested by experience or scientific research, that it was hid from the eye of a fellow laborer, or was retailed out to the highest bidder, and he as a general rule pledged



to secrecy also ; but drop by drop and hint by hint escaped, and fact by fact accumulated, until there was something tangible for the young inquirer to lay hold of, and now, thanks to the increasing intelligence of our art, and the communicative liberality proportionate to the attainments of its votaries, each one seems to be vieing with the other who shall impart the greatest amount of useful instruction, and thus it is united effort and through the establishment of Societies, Journals, and Colleges in this country, and mutual intercourse with each other, that is pushing dentistry forward so rapidly in advance, at least in the artistic branches of our art, of all other nations, it is the same principle that has raised the mechanic arts to the elevated and glorious position which they now occupy before the civilized world.

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Reported for the Dental News Letter, by J. H. McQuillen.

*Tumor of the Maxillary Sinus. Ligation of the Primitive Carotid Artery, right side, by Dr. PANCOAST, assisted by Dr. MUTTER, at the Clinic of the Jefferson Medical College, Philadelphia, Dec. 20, 1851.*

The patient, Frances Wallace, a young mulatto from Maryland, 17 years of age. About a year ago had a slight cold in her head, with a muco-purulent discharge from the anterior nare of the right side ; this was followed by the appearance of a tumor in the cheek, unattended by pain—her attention having been first called to it by her friends. From the time she first noticed it, the tumor had gradually increased in size, until becoming alarmed at its progress, she repaired to the city for advice and relief. When brought before the class she presented the following appearance : A tumor of considerable size occupied the right side of the face, the side of nose much elevated, and the nare completely closed. The tumefied condition extended along the cheek as far as the malar process. Decided pulsation was perceptible when the hand was placed on the tumor. On looking into the mouth, the hard palate on the right side was seen to be exceedingly prominent and oval in form. Dr. Pancoast stated that Dr. Mutter and himself agreed in attributing the appearances presented, to the presence of a large tumor, probably of a malignant character, within the antrum, distending its thin osseous parieties, and that inflammation of the lining membrane of the sinus was the exciting cause that had developed it. They also intimated that they had every reason to believe that it would be

necessary eventually to extirpate the maxilla; under existing circumstances, however, its removal would most likely be followed by fatal syncope, from excessive hæmorrhage, and therefore deemed it advisable at present merely to ligate the primitive carotid artery. They hoped by cutting off the large supply of arterial blood to arrest the further development of the tumor, but if, after this, it should be found absolutely necessary to extirpate the maxilla, the hæmorrhage would be very slight, and risk of the operation much reduced. It was considered injudicious to put the patient under the influence of ether, on account of the large column of arterial blood that would suddenly be cut off from the brain when the ligature was tightened.

The patient having been placed in a recumbent position, and the head placed so as to make the integuments on the front of the neck tense, Dr. Pancoast commenced by making an incision of some length through the skin, along the anterior border of sterno cleido mastoid muscle, in the surgical region called the middle triangle. The platysma myoid muscle and superficial fascia were successively raised on the grooved director and divided. One or two small arterial filaments were then tied to arrest a slight hæmorrhage. The deep seated fascia was next raised on the director, and divided also. With the end of his fore-finger, he then broke up the areolar tissue; the sheath containing the carotid artery, internal jugular vein, and pneumogastic nerve, being thus fully exposed to view, was raised carefully with the forceps and opened; the opening not being quite large enough, was enlarged on the director. The nerve being in the way, was put to one side; and the thyroid gland being somewhat hypertrophied, was, after some little difficulty, put aside, and the artery raised from the sheath on the grooved director. An eyed probe, armed with a ligature, was then slipped under the artery, and the ligature tied just below the bifurcation, where it divides into the external and internal carotids, and immediately above the omo hyoid muscle. Notwithstanding the large amount of arterial blood thus suddenly cut off from the brain, the patient did not appear to be materially affected by it, but, as Dr. Pancoast had prognosticated, the pulsation in the tumor was at once arrested. Should the operation of extirpation be performed, I shall avail myself of the opportunity to give you a detailed description of it.



*Origin, Progress and Objects of the Pennsylvania Association of Dental Surgeons. Read before the Society October 7, 1851.*

MR. PRESIDENT AND GENTLEMEN:—The committee appointed, pursuant to the following resolution, beg leave to report, that they have attended to the duties assigned them.

At a stated meeting of the Pennsylvania Association of Dental Surgeons, held Feb. 5, 1850, it was, on motion of J. D. White, M. D., seconded by E. Parry, M. D., *Resolved*, That a committee be appointed to prepare a brief history of the Origin, Progress, and Objects of this Association; whereupon, Drs. White, Parry, Fleming, Beale and C. C. Williams, were appointed on said committee.

With regard to its Origin. This Association first took its origin from a belief on the part of a few energetic young men practising the dental art, that fraternizing the feelings and aims of the inquiring portion of the dental profession, especially the younger practitioners, who had few prejudices to give up, or exclusive methods of practice to modify and assimilate with others, but had much to gain by comparing the results of experimental practice, (for nearly every thing in Dentistry was experimental at that period,) and the mutual interchange of sentiment kept up at stated periods, great good would be accomplished to each other, as well as the community at large. During the consultations which the originators of this Association had with the older practitioners of Dentistry, they were generally discouraged in the enterprise. This, however, did not prevent them from making the attempt; consequently, arrangements were made to call a convention, and the following Circular was signed and issued to all who were known to be legitimate practitioners of Dentistry in the State—70 in the City and 28 in the State—98 total, A. D., 1845.

The undersigned gentlemen, practising the *Dental Art*, believing that a properly organized State Society of Dental Surgeons would contribute very much, socially as well as scientifically, to the mutual improvement of its members, they therefore most respectfully invite you to meet them personally, or by proxy, in convention, at the Museum Lecture Room, Ninth and George streets, Philadelphia, on the second Monday of November, at 10 o'clock, A. M., to aid them by your influence and counsel in discussing the best mode of promoting so desirable an object.

*Signed*—Lewis Roper, M. D., J. M. Harris, Robert McGrath, M. D., G. A. Plantou, J. D. Moore, Ely Parry, M. D., A. R. Stouch, M. D., Robert Arthur, D. D. S., J. D. White, M. D., C. C. Williams, Chas. C. Moore, Wm. R. White, F. Reinstein, S. S. White, E. Wildman, M. D.

A large number of gentlemen responded to the call, at the time and place designated, either in person, by proxy, or by letter. The convention organized by calling E. PARRY, M. D., to the Chair to preside over its deliberations, and Dr. J. M. Harris to act as Secretary. After the objects of the association were stated by the President, the names of all those to whom circulars were sent, were read, when 25 answered to the call in person—5 by letter or proxy; after which a committee of five was appointed to draft a constitution for the government of the proposed association. The committee retired for a short time, when they returned with the draft of a constitution, which, on being read, was adopted, and the convention went into an election of members to form the society, according to the following resolution:

*Resolved*, That the members of the Association now forming, be elected from the convention individually by ballot; that the candidate be required to absent himself from the room whilst his election takes place, and that two-thirds of the whole votes given be necessary to an election.

Whereupon, the balloting took place, and resulted in the election of 23 active, and 2 honorary members.

On motion, the convention adjourned *sine die*.

The society so founded, organized by electing its appropriate officers, and adopting by-laws and rules of order for its future government.

It is with extreme pleasure that your committee remarks here, that the greatest unanimity of feeling and sentiment prevailed amongst the members of the convention, considering that few of them had ever met before, or had an opportunity of exchanging or comparing sentiments on the different dental topics which then engaged their attention. It seemed that all had one common object in view, that of improving the dental art.

*Second*. As to the progress of the Association:

On January 26th, 1846, Robert Arthur, D. D. S., read an opening address on the advantages of association, which was published. It was characterized by great ability.



June 9th, 1846, an essay was read on Dental Ethics, by J. M. Harris. Same date, an essay was read by J. D. White, M. D., on the Physiological and Pathological Considerations of the Dental Pulp, which was published.

February 16th, 1847, S. S. White read an essay on the History and Present Condition of Dental Surgery.

December 15th, 1847, Stephen T. Beale, M. D., read an essay on "Dental Caries," published.

April 4th, 1848, S. L. Mintzer read an essay "On the necessity of Preserving the Temporary Teeth," published.

December 5th, 1848, E. Parry, M. D., read a communication on Third Dentition.

December 4th, 1849, an essay was read from James Parry, York. Same date, an essay was read by F. Reinstein.

June 25th, 1850, a gold medal was awarded to Jones, White & Co. by the Association, for improvements in the manufacture of artificial teeth.

October 15th, 1850, Dr. J. M'Calla read an essay on Epulis.

February 4th, 1851, Dr. Du Bouchet read an essay on Narrow Clasps.

Since the commencement of this Association, there have been seventeen additional active and two honorary members elected; seven of these have been elected within the past year, which argues well for our prosperity. Many of the above essays elicited a great deal of useful information, and, with few exceptions, have been published in the Dental News Letter. However, this has been, perhaps, the least source of useful information. Oral communications and discussions have been of the greatest value, as they elicited the views and modes of practice of many able practitioners in minute detail. There have been also many able reports of committees on important subjects, which were the means of elucidating them.

There is a library forming, which contains many valuable standard works, and the whole of the numbers of the American Journal and Library of Dental Science, together with a cabinet of pathological specimens, mechanical operations, minerals, etc.

*Third.* *The objects of this Association* are, according to the language of the second article of the constitution, to cultivate the science of Dentistry and all its collateral branches; to elevate

and sustain the professional character of Dentists, and to promote amongst them mutual improvement, social intercourse, and good feeling. United effort is undoubtedly the surest means of securing success on the part of the members of any profession or calling, in attempting any great achievement. The old proverb, "That united we stand, divided we fall," applies to the dental profession as well as to any other. It is from these considerations that the gentlemen composing the Pennsylvania Association of Dental Surgeons would invite the great body of the profession throughout this enlightened State to join them in pushing forward so desirable an undertaking. It would not be improper here to remark, that, at the outset, many intelligent members of the profession caviled at some parts of the constitution and by-laws of the Association. Several communications were received, in which the proceedings were very freely criticised. Those communications were respectfully received, and their objections answered; and as the Association did not alter its course on account of them, it is fair to urge that its first propositions were right, as its success is increasing, proportionably as its principles are understood and appreciated by the profession. The Association has but one single object in view, and that is to elevate the condition of Dentistry, and render it as noble and honorable as any of the learned professions, and that end can never be attained by divided efforts or the action and achievements of any single individual. Those gentlemen now constituting the Association are as anxious to do that which is right and proper, and for the good of all, as any of those who are not co-laborers with them. In short, inasmuch as the progress of other Dental Societies, as well as our own, and the grand end towards which all societies are tending, have been so fully set forth on many occasions in articles in the widely circulating journals of the day, as well as in the most ably written addresses on similar topics. Your committee would respectfully ask to be pardoned for the meagre report they have to offer on the subject of their appointment.

Therefore, *Resolved*, That your Committee be discharged from a further consideration of the subject.

Signed,

J. D. WHITE, M. D., Chairman,  
C. C. WILLIAMS,  
S. T. BEAL, M. D.,  
ELY PARRY, M. D.



*On the Destruction of the Dental Pulp by the Heat of Electricity.*—By THOMAS H. HARDING, Esq.

It may be confidently stated, that a more rapid, certain, and safe method of destroying the sensitive pulp of a decayed tooth, than any with which dentists are already familiar, will be regarded as a great advantage by all engaged in the practice of dental surgery. Having read in your journal an abstract of a paper communicated to the Medico-Chirurgical Society by Mr. Marshall, giving an account of his method of employing the heat of electricity for the purpose of limited cauterization in surgical disease, and a subsequent report of several operations performed by him, it struck me that a platina wire, heated in the way he recommends, might be made available for the instantaneous destruction of an exposed tooth-pulp.

On communicating this idea to Mr. Marshall, I found that it had already occurred to himself, and had been mentioned by him as one obvious application of his method of operating with the electric heat. Moreover, his experience in the matter enabled him to suggest for the purpose a very simple and suitable apparatus, which is, in fact, a reduced copy of that which he had used so successfully in other cases, and in which the cauterizing portion consists of a flattened *loop* of fine platina wire.

The apparatus as ultimately employed by me may be thus described:—The battery, which of course may vary according to the choice of the operator, but which it is so desirable to render as elegant and simple in arrangement as possible, is constructed on a plan similar to that of the larger battery now employed by Mr. Marshall, which I believe he shortly intends to describe. It consists of only two pairs of plates, contained in a single cell, and is set in action by one fluid—viz., dilute sulphuric acid. The terminal six inches of the poles, which are of copper wire, plated, are supported on an ebony or ivory handle, upon the side of which one of the poles is interrupted at a particular point. The extremities of the poles are connected by a piece of platina wire, one hundredth of an inch thick and three-quarters of an inch long, which is bent into a *loop*. The sides of this loop are then brought parallel and nearly close to each other without touching, and is thus introduced into the pulp cavity of the tooth to be operated on. By a slight pressure on one side of the handle, the inter-

rupted pole is temporarily joined, and the platina wire immediately becomes brilliantly heated as it lies in contact with the tooth-pulp. Sometimes, however, I have found it desirable, in the first place, to complete the galvanic circuit, and thus heat the platina wire, before bringing it to bear upon the exposed pulp. The flexibility of the loop of wire enables the operator to bend it in any direction previously to use. In this way I have succeeded in rapidly destroying the pulps of decayed and condemned teeth and have proceeded, after a few minutes, to the operation of filling with gold or with Ash's metallic paste. I have also destroyed, with the greatest ease and rapidity, the pulps of incisor teeth, cut off for the purpose of being pivoted.

It is obvious that this method is applicable either for the simple cure of toothache, or as a preliminary step to the operation of filling. I am aware that there is nothing novel in the use of a hot wire for destroying the nerve of an aching tooth. The old village doctress has long ago cured toothache by the thrust of a hot needle or pin, and dentists occasionally use a heated wire. But the difficulty has been felt of applying the wire easily, and at a duly elevated temperature. In the method just described, this is surely, readily, and instantaneously accomplished. The vitality of the tooth-pulp is thoroughly destroyed, and it is even so far consumed or carbonized that the operations of filling or pivoting may be at once proceeded with, instead of having to be delayed. Owing to the extreme fineness of the wire employed, the local heat, though intense, is very limited in its action, and with due care the tooth substance need not suffer any appreciable injury. It may also be remarked, that in operating on some teeth, I have found, by completing the galvanic circuit on approaching the tooth, that the light given out by the incandescent wire aids very remarkably in giving a perfect view of the exact point at which the tooth-pulp is exposed.

In conclusion, I can only say, I beg confidently to lay this method before the notice of the profession, as the most ingenious and simple contrivance yet invented for the object in view, and as one which I think will be very generally adopted. It will give me great pleasure to exhibit the apparatus and the mode of operating to any who are interested about it; and I may add that the apparatus itself will be constructed by Mr. Coxeter, of Grafton-street East.—*London Lancet*.



*An Instrument for applying Electric Heat in Dental Operations.*—By GEORGE WAITE, M. R. C. S., Surgeon Dentist.

Hydrocyanic acid, as also the acetate of morphia, and strong acids, have for many years been used in dental surgery to deaden pain in teeth, but all these applications have been open to many objections.

“A conversation with the late Mr. Murphy of King’s College, Cambridge, (says Mr. Waite,) suggested to me the use of electricity in dental surgery; his words, as near as I can remember, were as follows:—‘The day will come when electric heat will be used in surgery, and also for many purposes in domestic arrangements.’

“The idea remained a secret with me till last year, when I communicated it to Mr. Redwood, and also to some other scientific friends, and they all appeared pleased with its simplicity and novelty.

“Early in the autumn, Mr. Laxton, of Fludyer street, entered a caveat for me at the patent office, to prevent other parties patenting the invention, although I had no idea of doing so. Considering then my plan no longer a secret, I communicated it to many friends, who expressed themselves so much pleased with it, that having obtained space at the Exposition, I forwarded a drawing of it to the illustrated catalogue of the Great Exhibition. But not to intrude too much on your valuable space, I will state that for the purpose I use a Grove’s battery with eight cells. When using it I have in my hand a holder with two copper wires passing through it, one positive from the battery, and the other terminating in a groove in the holder and fastened to a spring, by which I make or break contact at will with the negative wire. To the further end of the two wires a thin platinum wire is connected, and on the battery being charged and contact made, this takes suddenly the electric heat.

“The efficacy and simplicity of the process being so decided, I am enabled to use it for many purposes, viz., to evaporate quicksilver from cements, and render them much less injurious to teeth than they otherwise would be; also where too great sensitiveness exists, and which prevents the operator from removing the caries; where gums have receded and left the necks of teeth highly sensitive to the touch; where teeth are affected by mollities which

cannot by other means be combated; where teeth have to be pivoted, and when vitality remaining in the root would subject the patient to serious inflammation; where teeth have been broken, or cut, or filed, and left sensitive to cold and warmth; where violent toothache exists; where hæmorrhages come on, or slight bleeding into the cavity, preventing a continuance of any operation.

“The electric heat retains its force differently to all other heat which can be applied to the mouth; the platinum wire can be placed, without the patient being aware of it, near the part affected, heat can be produced almost momentarily, and suddenly deadened, and as a most interesting phenomenon, and one which has surprised me very much, in patients of a highly nervous temperament where I have expected much suffering, none has been endured on its application. It would be superfluous here to detail many interesting facts which the use of electric heat will discover to the scientific dentist; these philosophy explains with the laws of the sensitive faculty. It is my sincere hope that operators will be judicious in the use of this agent, and not bring it into disrepute by ill-judged and ill-timed applications.

“In many cases it will be found equally efficacious when holding it near the teeth, as if they were touched by it.

“Care must be taken not to continue its application too long, as it will burn up and blacken the part it touches.

“As time passes on, I look forward to its use being generally understood, and it will then give rise to many improvements tending to the benefit of society.”—*London Lancet*.

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**SUICIDE WITH CHLOROFORM.**—The Chief Physician at the Royal Hospital, Vienna, Dr. Reyer, was conversing, one day last week, with his colleagues, as to the least painful form of death, apparently in good health and spirits at the time; yet that evening he was found in his room a corpse, having put an end to his existence by fastening a bladder, filled with chloroform, round his mouth and nostrils, by means of a band of adhesive plaster. This is, as far as we can remember, the first time that chloroform has been used for suicidal purposes.—*London Lancet*.



# THE DENTAL NEWS LETTER.

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JANUARY, 1852.

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## THE WORLD'S FAIR.—THE RESULT SO FAR AS DENTISTRY IS CONCERNED.

In our July issue, we gave a letter, descriptive of the exhibition of Teeth, Dentistry, etc., at the World's Fair; also, some remarks as to the state of dentistry in England and on the Continent; and that we may keep our readers posted-up, we have now to say a few words in conclusion, especially on the result.

We have before us a copy of the "Times" newspaper, containing a list of the awards, which we have run over with some curiosity, for the purpose of ascertaining what degree of usefulness and importance articles must possess to entitle them to an award, and in the whole list *we do not find a medal awarded, or even mention made of teeth or dentistry in any department.* We had been prepared for this by previous information, so we were not surprised. The "Times," in an editorial which prefaces the list, says: "The last act of a most eventful drama has been played out to its close, and the great exhibition of the industry of all nations is now a thing of the past." Now we are inclined to think, that the last act was a very broad *farce*, not only in view of dentistry, but in the general result; and this, we think, will be evident to any who will take the trouble to examine the list of awards. In proof of this assertion, and that none may charge us with a disposition to cavil because we are not pleased, we give the names of a few articles which were deemed worthy to receive medals: *Tobacco, Segars, Feathers for ornamental purposes, Toilet Soaps, Fancy Soaps, Perfumery, Walking-sticks, Wax Figures for Hair-Dressers, Fans, Confectionary, Pipes, Shirts, Maple Sugar, Dolls, Doll's Dresses, etc.*

To the above articles, over *fifty medals* have been awarded. These were found of sufficient importance to merit an award, and yet dentistry is not even named much less awarded. Surely, dentistry in the old world must be of very small importance, and but poorly appreciated or understood, to have been thus over-

looked; but how the Americans on the committee to which appropriately belonged dentistry, could have neglected it, is beyond our comprehension and inexcusable. Few articles were more prominent than the specimens of dentistry in the exhibition, and they must have been seen. Why, it was a common remark, in the crystal palace during the exhibition, "How far America is in advance of all other countries in the profession of dentistry." The same remark was made by Dr. Smith in the Boston Medical and Surgical Journal. The fact that such expressions were made, is proof that the articles were seen and examined.

We were told in person by more than one gentleman in good practice in dentistry in London and elsewhere in Europe, that we Americans certainly make the most beautiful teeth, and commending especially the tinting or coloring; and yet no notice were taken of those teeth by the jury. Three thousand and eighty-eight medals were awarded, and not one of them for dentistry. What! dentistry of less importance than dolls or maple sugar, or, still less, of doll's dresses! Have we put a wrong estimate upon the importance of dentistry? or is the fault with the jury? We incline to the latter opinion, and will believe that dinners and wines were more earnestly sought after, and more faithfully discussed, than were the articles and their merits over which they exercised the functions of jurors.

A friend in London, who has had much to do with the exhibition, writes us as follows: "It is most extraordinary that no investigation of teeth took place by any class of jurors. Indeed it has been admitted by one of the principals, that such articles had never entered their thoughts. I am disposed, however, to conclude that prizes distributed *so generally*, as has been the case in this affair, are not of very great worth."

And thus, some *forty* odd cases of specimens in one branch of manufactures, among which were specimens of plugged teeth that would do honor to the best operator in our country, and were "*most worthy work*." Also, specimens of mechanical dentistry, which displayed quite as much ingenuity and patient labor as the best operator on the human teeth can lay claim to in his fillings. Also, specimens of artificial teeth, or what a recent writer, in a peculiarly disparaging manner, is pleased to term "*porcelain or china-ware*." They, notwithstanding, or some of them at least,



possessed in themselves the same degree of excellence which distinguished the specimens in the other branches. These with many useful appliances and auxiliaries, representing a distinct profession of no mean importance, were entirely eclipsed by the glowing beauties, *usefulness*, importance, and exceeding worth of *doll's dresses*. Surely there is some truth in the remark, that "there are children of a larger growth," of which the jury were a prominent example.

The truth is, we (the American exhibitors in dentistry) have been unfairly treated, and we have a right to and do complain of such downright neglect and criminal carelessness on the part of the jury; and again repeat that the whole affair was a perfect farce, so far as awarding merit was concerned, not only in view of our own branch (for other branches may be named), but in the utter insignificance of many articles to which medals were awarded, to the entire neglect and oversight of far more important matters.

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*An Address, delivered before the Pennsylvania Society of Dental Surgeons. By ELISHA TOWNSEND, D. D. S. Philadelphia, Oct. 10, 1851.*—This is a lengthy and able address, advocating, in strong terms and with forcible arguments, the establishment of Dental Colleges, as the best means of affording students a thorough Dental Education; also commending the establishment, and usefulness, of Dental Associations as of vital importance to the welfare and improvement of the profession.

We have announced in another place the establishment of a Dental College in New York State, and hope soon to make the same announcement for our own State, (Pennsylvania). All this is proof of the increasing demand by the public, as well as the profession, for the establishment of Dental Schools, where a proper and efficient course of study shall be given by those preparing for practice in dentistry, that they may be made competent and useful in their profession.

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*Tortoise Shell for Instrument Handles.*—We were shown by Mr. Evans, of Paris, some very neat handles for excavators and drills, made of this shell. They are light and pleasant to the hand, and sufficiently strong with a good ferule. They can be moulded to any shape. We will ascertain if they can be obtained or manufactured in this country.

*A Plain Treatise on Dental Science and Practice.* By S. M. SHEPHERD, *Dental Surgeon.* Petersburg, Va., 1851.—This is a neat little publication of some forty-eight pages, designed for popular reading, and is replete with information to the heads of families, etc.

What will some of our dentists say—those particularly who remove the nerves of, and plug molar and bicuspid teeth—to the following extract.—The italics are ours:

“It is always a source of profound regret to the dentist, if he rightly estimates his profession, to find a case beyond his skill; and unwilling to be totally foiled, not a few practitioners have sought to preserve such teeth by extracting the nerves and filling the hollow fangs quite up to their points. This mode of treatment, where it can be made thorough, is admissible and highly useful. Having all internal causes of disease removed, and the vacuum thoroughly filled with gold, the tooth is placed in a condition to remain in comparative health for many years. The peculiar construction of the molar teeth, however, also the superior or upper bicuspids, and the entire lower set, *utterly forbid thorough treatment in this mode of practice; and if all attempts are not failures, the credit is due to other causes rather than the skill manifested in the performance of the operation.*” Again, “*The only remedy which I propose for all other classes of teeth (except the six upper front), having exposed and diseased nerves, is the extraction of them.*”

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*Seventh Annual Announcement of the Ohio College of Dental Surgery, Cincinnati.*—This institution, which is now fairly established, has had much to contend with; but the energy and ability of its faculty, and the growing conviction that colleges are essential to a thorough dental education and to the protection of the public, leave us no room to fear but that its success will be commensurate with its usefulness.

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*First Annual Announcement of the New York College of Dental Surgery at Syracuse, N. Y.*—This College bids fair to be eminently successful, both on account of its location and the ability of its faculty. It has our best wishes for its success.



## PIVOT TEETH.

BY J. TAFT, D.D.S., XENIA.

The operation of inserting pivot teeth has been considered by many, as one scarcely admissible, alleging that it is without a scientific basis; experience, however, shows us that this operation may frequently be performed with the happiest effect. To the ordinary method of inserting pivot teeth, there are many serious objections which cannot be overcome while that method is pursued; the tendency to rapid decay, and the consequent irritable condition of the contiguous parts, and the frequent production of abscess, the offensive odor, and vitiated condition of the mouth, are objections, as intimately connected with the common method as cause and effect can well be. There are other objections that might be named, but the above are the principal ones, and those most commonly referred to. The rapid decay of the roots of teeth bearing artificial crowns, is occasioned by their continued exposure to the action of the fluids of the mouth, and that in a vitiated condition; this exposure is in no way prevented by the common wood pivot.

The irritable condition of the contiguous parts is in almost all cases produced by *decaying* roots of teeth; those roots that remain sound, do not, with few exceptions, produce irritation.

Without irritation there is no abscess. The offensive odor is either a consequence of the decaying condition of the root; or of an accumulation of vitiated foreign matter in the joint between the crown and the root. The offensive condition of the mouth may arise from the same cause. Any method by which these difficulties can be overcome, would add much to the value of pivot teeth. This can be almost, if not altogether, accomplished by the use of the gold tube, and a gold substitute for the wood pivot. This operation, though it has for the most part been described, is not yet practiced to any extent. The gold tube or hollow wire can sometimes be obtained at the dental depots; but it is difficult to get it, as it is wanted in every case. The manner in which it is prepared is very simple: take a piece of common gold plate, medium thickness, and about three and a half lines in width, and of any desirable length, and close it round a steel wire, just the size the pivot is designed to be; close it as per-

fectly, with the hammer, in the groove as possible, then anneal and draw it through the draw-plate, with the steel wire still within it, until it is perfectly smooth and even. The tubes may now be sawed off at the proper length, and one end and the joint soldered; next smooth off the soldered parts, and then, with the screw-plate, put a sharp fine screw thread upon it. The tube is now ready to be inserted; the root having been prepared and drilled out to the proper size, the tube having a piece of steel wire in it, is grasped with a pair of small pliers, with a slide to fasten them upon it; it is very carefully screwed into the cavity of the root, until it is to the bottom. Great care must be exercised in this part of the operation; after the tube is in, if the root was perfectly sound, with a small fine saw, the projecting part of the tube is cut off, and then with a very fine file, dress it smooth with the root, and then burnish it and the end of the root until they are perfectly polished. I do not think it necessary to use the screw tap in the root before inserting the tube, for it enters equally as easily without the tap, and introducing the tap would only cause a greater amount of irritation; it is very apparent that it would be almost impossible to make the thread of the tube follow that made by the tap in the root; and if one should cross the other, the operation would not be so perfect; the tube will cut its way quite as ready as the screw tap. It is oftentimes the case that the bone of the tooth, at the orifice of the cavity, even after the fang has been dressed off, is decomposed; when this is the case, the decayed portion should be perfectly removed with the excavator—and after the tube is inserted, and before it is cut off, the excavation should be perfectly filled with gold, and then all dressed and burnished together. A root prepared in this way is in much the same condition as a plugged tooth, except that a small portion of the tooth bone is exposed; but this, if well burnished, will resist decay for a long time. Here there is no cavity exposed, no lodgment for vitiated matter.

The root is now ready to receive the artificial crown which must be furnished with a pivot of gold; having the pivot wire of the right size, a portion of the hollow wire of which the tube is made, should be cut off equal in length to the depth of the hole in the artificial crown, into this place the first, and after applying ground borax, insert both into the crown, and then solder. The



blowpipe must be used with great care to prevent cracking the tooth; for soldering, the tooth should be placed upon a piece of charcoal, and not in plaster. In directing the flame upon it, it should be thrown upon the body of the tooth, and not upon the pivot, that the solder may flow down to the bottom of the cavity.

Pivots thus put in, are as firm as if put in at the formation of the tooth. After dressing the pivot at the neck of the tooth where the solder may have flowed, it is ready to be inserted. Teeth thus inserted can be removed at pleasure, and may be kept as free from offensive accumulations and odors, as artificial teeth under any other circumstances.

If this method of inserting pivot teeth was adopted by all good dentists, it would add very much to the character of this operation which has been at a low ebb.—*Dent. Register of the West.*

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#### THE NECESSITY FOR A COLLEGE OF DENTAL SURGERY.

To the Editor of the Lancet.

SIR: As the numerous London medical schools are about uniting all that talent can desire, as far as medicine, surgery, and physiology are concerned, and as most specific maladies will be especially attended to, is it not desirable to appoint in *every* hospital a qualified dentist, to lecture upon the first and second dentition? the maladies incidental to the teeth and gums—in a word, the hygiene of the mouth ought to be made a specific study, as much as diseases of the eye, ear, or stomach; and many symptoms arise of toothache derivable from sympathy with the above organs, requiring discrimination and care in treating. I consider, by insisting upon the formation of chairs of dental surgery in each hospital, that our present degraded profession will be brought to its proper position, and by the instrumentality of such lectureships we shall secure to our branch men of science, and be the means, I expect, of founding a Dental College, where dentists must pass an examination to become respected members of our rising and important profession. Why such men as Messrs. Bell, Saunders, Robinson, Clendon, Tomes, and other authors, do not moot this subject, I am at a loss to know, as they could so ably edit a monthly dental periodical that would be extremely useful, and benefit our cause essentially, and probably be the means of forcing the aspiring dentists to become

better educated, and more valuable members of our present homogeneous class.

Hoping these few remarks will stimulate the above scientific authors to fresh exertions in behalf of dental science, I shall leave the affair in their hands, trusting that I may have aroused them from their present lethargy, and that I shall soon hear of something to the advantage of our numerous body.

I am, sir, your obedient servant,

JAMES I. KEENE, Dentist,

Formerly Ass't House Surgeon at St. George's Hospital.

Boulogne-sur-Mer, Sept., 1851.

P. S.—I am aware that two or three metropolitan hospitals have surgeon-dentists attached, but all of them ought to have lectures given to the medical students. I am also aware, that in America there are valuable dental journals, but I think England ought not to be behind-hand, especially as they have a Dental College, and we have not! *O! mirabile dictu.*—*Lon. Lancet.*

[We have *three* Dental Colleges in operation, and a charter for a fourth; also, *five* dental periodicals.—ED. NEWS LETTER.]

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#### DR. TAYLOR ON FILLING TEETH.

*An Address delivered before the Mississippi Valley Association of Dental Surgeons, at Cincinnati, September 10, 1850.*

BY JAMES TAYLOR, M. D., D. D. S.

[CONTINUED.]

The progress of our science points to perfection, and this accomplished, the entire preservation of the dental organs is the result. Hygeanic treatment, so far as applicable, holds, of right, a high place in our regard; yet with our present knowledge how inadequate this would prove. How could we control our patients in this respect? And without an entire control of diet, and all that pertains to cleanliness, but little could be accomplished. To correct the evils resulting from constitutional defect in the dental organization, we should have to control mothers, nurses, diet, exercise, and indeed many of those infantile diseases which so much baffle the medical practitioner, and consign to an early grave one-third of the human race.

But to return to the special object of this address, I would reiterate the remark made at our last meeting, when this subject



was under discussion, which "was that considering the importance of the operation—its frequency and the difficulties attending it, it is strange that so little of that which is specified in the detail, has been given by those who have written on this subject." It is not so in relation to any of the operations of general surgery; and yet there is no other operation performed one-twentieth as often, (save the extraction of teeth.)

It is very easy to say that the decay must be thoroughly removed, that the cavity must be well shaped, and the gold well consolidated. This is all true, and appears so simple and plain that every man thinks he may do it easily; and indeed nothing is more common than for young and inexperienced operators to think they can fill a tooth as well as any one. I might give repeated examples of this. I recollect one case, where the young gentleman said, that his fillings had only one fault, and that was they were too *hard*.

In the present discussion of this subject, I shall, so far as brevity will permit, follow the course which I pursue before the dental class. In doing this, however, I shall not be able to go into all the detail, but will give general principles and classifications. All cavities are not alike, either in shape or location, the *modus operandi* also varies; classification is then necessary for description. How can you describe without a name? To do this so as to be well understood, the name should locate the cavity, but to avoid confusion, such name should be adopted as would simplify as much as possible; hence I have adopted the following general classification:—

First, central cavities. These embrace all those situated on the cutting or grinding surface of the teeth—the molars and bicuspidés most generally present such cavities.

Second, the labial. These are situated on the outer or labial surface of the teeth. The molares most generally present this location of decay; yet, in certain forms of disease, it extends to the incisores, canine and bicuspidés. I might say a certain form of decay first attack these, then the molares.

Third, the approximal. These are situated on the approximal surface of the teeth, and form a class as a general rule the most difficult to treat. They are found on all the teeth, and in form are modified by the shape of the teeth affected.

Fourth, the palital. These are located, as the name denotes, on the palital surface of the teeth. They are the most rare of any—occurring most frequently on the lateral incisors, and first and second molares above.

These four divisions embrace nearly all, yet we have at times combinations of these. There is the central and approximal combining the central and labial, the central and palital, the palital and approximal in the incisores. Other combinations may occur, but these are the most usual.

Let us consider the four distinct and marked divisions, and in the order named; then, if time permit, consider the combinations, with those presenting an exposed nerve, &c. &c.

First, the central. This class of cavities are most generally found in the molares and bicuspides, and are the most accessible and least difficult to fill of any. Yet even here where success would appear always certain, how often we are mortified to find that the most plain and apparent principles of mechanism have been neglected. The reason why such fillings often fail and come out, is not because the cavity may not have been well cleansed and formed, but from the mode of introducing the gold. This, I think, will be made apparent as we proceed in this discussion.

The first duty of the dentist is carefully to examine the nature, depth, and extent of the cavity he is about to fill. If the decay is deep, he wishes to know if the nerve is exposed, the condition of the bony structure and the strength of the walls of the cavity. To determine these several conditions, he must carefully probe the decay, scrutinize the color of the enamel and tooth, &c. &c. When this has been satisfactorily done, the next step is to uncover, as it were, the disease; that is, break down the frail portions of the enamel which generally hide from our view the extent of the decay in the bony structure.

Close observation will enable us to determine pretty accurately the extent of decay by the color of the tooth; for the decay beneath is reflected through the enamel, giving it a black, blue, or white appearance, depending on the nature and color of the decay. It is always, however, different from the healthy color of the tooth.

The first step in the preparation of the cavity, is therefore to



remove this enamel, and for this purpose I have some half dozen cutting instruments of different forms ; flat on one side and beveled on the other ; so as to form a cutting edge like a chisel ; two pair of these come to a sharp point. For the lower teeth, the cutting part of the instrument is bent at right angles with the bar. In the use of these I commence at the centre of the decay, and break in by small piece after piece, the enamel, until I find the border firm and strong. Then with an excavating instrument remove all the softened portion of the tooth, and by the time this is done, every point around the opening is so exposed as to indicate the exact line to which we should carry the use of the cutting instrument. I use these instruments because they are more speedy, and produce less pain than the drill. After, however, I have progressed thus far in the operation, if the cavity is round or will bear being thus formed, I select a drill as near the size of the decay as possible, and with this, round the mouth of the cavity ; but it must be recollected that all these cavities are not of this shape, nor will admit of this construction. We find on the molares, and more particularly on the inferior, small grooves or fissures running at right angles across the centre of these teeth, resembling a suture, uniting the four prominences on the grinding surface of the teeth. The centre where these fissures cross is depressed, and often so much so as to form a lodging place for small particles of food. Here is the point where disease commences, and it extends along these sutures to where they disappear in the smooth enamel which forms the outer surface of the tooth. At the extremes of these sutures, there is often observable a depression much like the central one, and each of these points like the central becomes the seat of disease. When decay has progressed to any considerable extent, all the points of disease are merged in one, forming a large and single cavity ; but where this is not the case, we find a condition of things requiring much time and skill to overcome. If the disease has followed the line of these sutures, we will have an irregular shaped cavity, with four points of healthy bone corresponding to the four prominences of the tooth, running in toward the central decay. These may be too firm and sensitive to bear cutting away. It will not do, however, to drill out the centre and fill, leaving a dark line along the extent of these sutures ; but these must also be cut out, each

forming a cavity of itself sufficient to retain a plug if there was no connection with the centre. In the preparation of such cavities for filling, I first open the centre with my cutting instruments, then follow these sutures as far as diseased, remove the loose carious portion of tooth with an excavator, and then determine, by careful observation, the form which is best to give the cavity. In some cases, I first with a drill round the centre, then with a much smaller one, drill out each suture. This is, however, merely to give form to the border of the cavity; for, after this is done, I prefer using suitable excavators, so bent and pointed that I can reach any point of the cavity. In the use of these instruments, I need hardly say that the cutting should be from the nerve; this is particularly necessary in deep decay. Every practitioner of experience and observation must have observed the cessation of sensibility to some extent which follows the perfect removal of decay from the sensitive tooth. How shall we account for this? is it the diseased portion already softened by disease, the touching of which gives such pain? If not, why is the sensibility so sensibly diminished when this is removed? To avoid as much pain as possible, in the removal of such decay, as well as to facilitate the operation, I select some point of the cavity most accessible, and here with an excavator well adapted to the cavity, reach as soon as practicable the firm bone beneath. Then with each stroke of the instrument, first touch the healthy bone, and drawing outward, remove the carious portion. In deep decay, this can be done by circling around the nerve, leaving the portion over the nerve to be last removed. This is specially necessary when we anticipate its exposure. When, however, there is much sensibility around the border of cavity in the bone just beneath the enamel; we need not expect the exposure of the nerve. In deep decay when there is no sensibility at this point, I should expect a dead or exposed nerve. There is much on this part of the subject which might be dwelt upon; but a more appropriate time will be when we come to the filling of the teeth over exposed nerves. Enough has been said to give some idea of the different conditions of decay to be met with, particularly in the inferior molares. Sometimes the same is observable in the superior.

To be continued.



## NEW AGENTS.

We publish below the names of some new agents for the benefit of such of the profession as reside in their respective neighborhoods :

J. H. REED & CO., druggists, Chicago, Ill.

D. B. PLUMB & CO., druggists, Augusta, Ga.

C. A. MOORE & CO., druggists, Jackson, Miss.

We annex a list of agents previously appointed :

Dr. J. M. BROWN, druggist, Cincinnati, Ohio.

SMITH & DIETRICH, druggists, Dayton, Ohio.

W. A. GRAHAM, druggist, Zanesville, Ohio.

J. P. POLK & CO., druggists, Baltimore, Md.

D. W. GROSS, druggist, Harrisburg, Pa.

J. C. RICHARDS, druggist, Chambersburg, Pa.

JOEL MOHLER, druggist, Pittsburg, Pa.

C. A. HEINITSH, druggist, Lancaster, Pa.

JOS. DOUGLASS, druggist, Allegheny City, Pa.

W. A. HERRON, druggist, Peoria, Ill.

JNO. E. SMITH & CO., jewellers, Galena, Ill.

AARON STRETCH, druggist, Nashville, Tenn.

F. H. CLARK & CO., jewellers, Memphis, Tenn.

C. A. DICKINSON, jeweller, Richmond, Ia.

W. M. HUGHES, druggist, Madison, Ia.

J. B. BULKELEY, druggist, Norwich, Ct.

E. BIGELOW, druggist, Springfield, Mass.

ROOT & CHAFFEE, druggists, Pittsfield, Mass.

A. C. SPEAR, druggist, Burlington, Vt.

W. KING, JR., druggist, Buffalo, N. Y.

W. F. BOOLS, druggist, Schenectady, N. Y.

J. E. WARNER & CO., druggists, Utica, N. Y.

C. HEIMSTREET, druggist, Troy, N. Y.

GEO. HILL, druggist, Detroit, Mich.

GEO. COSTER & CO., druggists, Mobile, Ala.

CLARK & ALLISON, druggists, New Orleans, La.

WALTON & TILFORD, druggists, St. Louis, Mo.

J. F. WINTER & CO., druggists, Columbus, Ga.

E. L. STROHECKER, druggist, Macon, Ga.

C. C. NORTON, druggist, Lexington, Ky.

SUTCLIFFE, McALLISTER & CO., druggists, Louisville, Kentucky.

BOATWRIGHT & BARKULOO, Columbia, S. C.

J. A. CLEVELAND, druggist, Charleston, S. C.

BENNETT & BEERS, druggists, Richmond, Va.

SAMUEL LEWIS, jeweller, Washington, D. C.

N. SANDS, druggist, Rio de Janeiro.



### SILVER MEDAL FOR CORUNDUM WHEELS.

We placed some of our manufacture of Corundum Wheels in the last exhibition of the Franklin Institute, and in a note to the Judges claimed to be the first and only party manufacturing them in this country, and further, that they were superior to the English, and sent some of the English along with some of our own manufacture for them to test. The result was a First Premium or Silver Medal.

The following is the report of the committee:—

“Wheels, Slabs and Files for grinding porcelain, glass, &c., made of Corundum, which is considered the substance or principle upon which emery depends for its hardness and consequent utility, made and deposited by Jones, White & Co. The judges, from personal experience, testify to the superiority of this material over emery, for the purpose designated, and for which it will probably supercede the necessity; also, the articles manufactured from this material are superior to those *imported*—A FIRST PREMIUM.”



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows:

"This case is considered worthy of a special notice, for the following reasons:—The exceeding *vital* appearance which the teeth *maintain* when exposed to the *test of artificial light*, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The *manner* in which the *platina pins* are inserted, is also adjudged to be a *decided improvement*. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on next page cuts of our principal medals.

## GOLD MEDALS.



# THE DENTAL NEWS LETTER.

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APRIL, 1852.

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From our Paris Correspondent.

## THE GLANDS OF THE MOUTH, AND THEIR FUNCTIONS.

*Messrs. Editors* :—A most interesting and important communication has recently been made to the Paris Academy of Sciences, by the distinguished physiologist, M. Claude Bernard. We hasten to lay, in a summary form, the result of his researches before our professional brethren in America, who cannot fail to be deeply interested by this new addition to positive knowledge.

The secretion of saliva in man, and the mammiferæ animals, is effected by three principal glands. 1st, The parotid, situated in the hollow of the articulation of the jaw. 2d, The sub-maxillary, which is on the palate. 3d, The sub-lingual, the name of which indicates its position.

From the similarity of the structure of these glands, anatomists have heretofore admitted that the products of their secretions were identical, and were destined to the same purpose.—They even extended the expression of salivary glands to the pancreas, which is situated in the abdomen, and which furnishes its products to the intestine, a short distance from the stomach. It will be remembered that M. Bernard has already, in his remarkable work, revealed the special function of this organ, which is to aid the digestion of fatty matter, by throwing upon the food an eminently emulsive liquid. In following up his researches, and in applying to the salivary glands the same species of investigations, M. Bernard has become convinced that each gland secretes a liquid different from the other, and that each liquid has its special distinct use.

In speaking of the saliva as a unique fluid, physiologists have been in error; there are, in fact, three species of saliva to be found in the mouth, more or less mixed, and in greater or less proportions, viz :—1st, The saliva of the parotid, which is abun-



dant and liquid, like water. 2d, The saliva of the *sub-lingual* gland, which is thick and gummy; and 3d, the saliva of the sub-maxillary, which participates of the nature of the other two.

The first of these moistens and imbibes the food, and dissolves easily what is soluble; while the second, *without being able* to penetrate or dissolve the substances which it touches, lubricates or gums their surface. The third saliva appears to aid the sense of taste. In order that these may not be thought mere imaginary distinctions, we propose to present some details indicative of the special functions of each of the three salivary glands.

Nothing is easier than to show, on a living animal, that the parotidian secretion is solely destined to moisten the dry food, and to favor its mastication. In fact, the variations in the quantity of this secretion are equally graduated, according to the dryness or moistness of the food. In the case of a horse, the parotidian canal being cut, and turned outwards, it was seen that when dry hay, straw, or bran were given him, a copious secretion followed; and when these same substances were given in a moistened state, the secretion was exceedingly slight. The same results have often been found in experiments upon dogs and rabbits, and this gland may thus, in less than an hour, be made to secrete from eight to ten times its weight in liquid. The conditions of secretion of the sub-lingual gland are entirely different. While mastication is going on, and the parotidian saliva is flowing freely, the sub-lingual gland remains inert; but when mastication is ended, and just before swallowing, the sub-lingual saliva flows abundantly. The distinctive character of these two salivas may be very easily seen, by examining a cud of hay taken from the œsophagus of a horse; the interior will be found pasty and perfectly moistened by a watery saliva, which, being extracted, will be found to have the properties of that secreted by the parotid gland, while the exterior will be covered with a thick coat of gummy saliva, similar to that from the sub-lingual gland.

The mechanical action, or the movements of swallowing, stimulate of themselves the sub-lingual secretion, without any regard to the dryness or moistness of the aliments themselves. Thus, even while swallowing water, the sub-lingual gland continues its secretions.

As to the sub-maxillary gland, its principle of action is entirely different from the other two, it being subject to influences which depend on the sense of taste. The three salivary conduits of a dog having been isolated, a variety of substances were placed in his mouth, when immediately the sub-maxillary gland secreted a large quantity of saliva; then afterwards the other glands gave their contingent. In acting differently and mechanically upon a nerve of taste, the relation between that sense and the sub-maxillary saliva was established with the greatest precision; thus, on irritating the lingual nerve with pincers, a copious secretion of this saliva, *and of this alone*, took place. This last has been regarded, in Paris, as one of the most interesting of experiments, seeming to reveal one of the secret springs of our organization.

It will be readily understood that on account of their special functions, the different glands will enter successively into action, and this has been often proved by M. Bernard, by actual experiment. On giving meat to a dog, the salivary conduits of which had been laid open, the sub-maxillary saliva, destined for taste, flows first; then the parotidian saliva, to aid in mastication; then the sub-lingual, to facilitate the swallowing.

Not the least interesting fact—confirming, as it does, the others—is, that the physical and chemical properties of these salivas are perfectly in harmony with their respective functions.

It would be easy to dwell upon this important subject, but the researches of M. Bernard will, before long, be presented to the public. We were anxious, however, even in this imperfect form, to give an early notice of them to our friends.

We must not forget to mention that many instructive facts in Natural History have been developed by M. Bernard, as corollaries of his discovery of the difference of the salivary glands. In birds, the absence of the parotid and sub-maxillary glands are easily accounted for, when we remember that they have neither to taste nor to masticate. The saliva which they secrete, serving only for swallowing, is similar to the sub-lingual saliva of the mammiferous animals generally. Among these, it has also been observed that the different glands vary in size, according to the nature of the food habitually consumed, and to the consequent activity required; in those which live upon dry and hard sub-



stances, the parotid gland acquires the maximum of its development; while in those which, like the seal, live in the water, and take their food in a moist state, their gland either disappears entirely, or is greatly diminished in size.

We must reserve for a future occasion the investigation of the bearing which these observations of M. Bernard may have upon the science of Dental Surgery.

THOMAS W. EVANS, D. D. S.

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### SPRINGING OF FULL UPPER PLATES IN SOLDERING.

BY T. L. BUCKINGHAM, M. D., DENTIST.

This is a subject of vast importance to the dentist, for I don't know of a more trying thing than to make a piece of artificial work, and finish it up nicely; and when we think our work is all done, to try it in the mouth and find it does not fit; and the work must all be done over again; and not only to have the work to do over, but to know that no matter how much pains we may take with the case hereafter, we can never make as nice a job of it again. This is as much, I think, as an ordinary man can bear, without giving some vent to his feelings. But this is not all the difficulty, for he has the satisfaction of knowing that the same thing may happen again, and from the same cause, namely, the springing of the plate in soldering the teeth on.

If we had but one job to spring in a great many, we might think it was caused by some oversight; but when they nearly all spring, and there is only one in a great many that does not, we must conclude there is some real cause for it. Now, there are two things to be found out, viz:—the cause for the springing, and some mode to prevent it.

The cause of plates springing, some have thought arose from the alloy in the gold; others from the plate not being properly annealed before the teeth are soldered on; and others from the plate being unequally heated while soldering. All these may have something to do with the plate getting out of shape, but I don't think they are the real cause of all the trouble. The alloy in the gold does make the plate stiff and elastic, and hard to swedge up to the cast properly; but, if the alloy has been thoroughly mixed with the gold, it can have no other effect on it.

The annealing, I have no doubt, may have something to do with springing, if the plate has not been frequently annealed while being swedged up. Some parts of the plate may be driven down to their places, and they may draw or spring others with them, so as to make the plate fit the cast tolerably well; but the different parts of the plate are not at rest; some parts have a tendency to fly back to their original position, while the others hold them in their places. Now, if heat be applied, and some parts of the plate heated more than others, the cold parts of the plate, being stiffer and more elastic than the hot, would naturally draw the plate out of shape. But this could happen but once, for, after the plate has been thoroughly annealed, the parts would have no tendency to change, unless it should be heated so hot as to allow it to swage down by its own weight. That not being properly annealed is not the great cause of our difficulty, I am very well satisfied, for I have been in the habit, for a long time past, of soldering a wire around the edge of the plate. It not only makes the plate stiffer, and the edge thicker, but it makes a shoulder for the teeth to butt against, when gum teeth are mounted. It also gives additional strength to the teeth, by taking part of the strain off the pins, and makes a much smoother job.

To put this wire around, I clamp it to some part of the edge of the plate with an iron clamp, then solder it fast at that point; I then bind it around the edge as far as I can make it fit close to the plate, clamp it, and solder it again, and so repeat until the wire is soldered at different points around the edge. I now lay solder on the places between these points, and solder the wire fast all around. I sometimes have to heat my plate as often as eight or ten times, and always at least five or six times, and yet I very seldom have the plate to spring; and, if it does spring any, it is very little—nothing like what the same plate will spring afterwards, when the teeth are soldered on. I never take any care, in heating my plate, to have all parts of it heated to the same degree, but I heat the point where the solder is to flow hot enough to melt the solder, while the other parts of the plate are comparatively cold, then dip it immediately into cold water, to cool it. The only precaution I do take is, not to heat the plate hot enough to allow it to swage down by its own weight. Now, if a plate will stand all this heating and cooling, without getting



out of shape, I think we should look for some other cause for the subsequent springing than the annealing, or the alloy in the gold.

I have been of the opinion, for a long time, that the plaster we use to hold the teeth in their places, while we are soldering them to the plate, is the cause of nearly all this springing, and I will briefly state my reasons for thinking so.

We know very well that plaster and all similar substances, when mixed with water, will contract when heated. There is always a large quantity of water that is mixed with the plaster, that will not combine with it chemically, this is evaporated at a low heat: then there is one pound of water to every four pounds of plaster that enters into a state of crystalization; this is also driven off at a less heat than it takes to solder a set of teeth: the loss of the water causes the plaster to contract. This is evident from the fissures that are made in the plaster by heating it. If the plaster expanded, those fissures would be closed while the plaster was hot, and only show themselves when it became cold; but they are made by heating, and we find it necessary, to keep the teeth from being drawn out of their places, to tie the plaster together by putting pieces of wire in it when we put it around the teeth, and also mixing it with sand, the wire and the sand will keep it from cracking, but they will not prevent it from shrinking.

The teeth themselves, although they will not contract while soldering, do not expand in any thing like the same proportion the plate does.

Now let us examine the manner of arranging the teeth on the plate, and the mode adopted to hold them to be soldered. We place the teeth around on the outside of the arch of the plate in close contact with each other, if they are gum teeth, and these are the only kind we have any trouble with, (I never have any difficulty about getting a plate to its original shape if the teeth do not touch each other,) then run plaster around them to hold them in their places. We now apply heat to solder them, the plate expands and the arch is enlarged very much; the teeth do not expand, or if they do it is very little; the plaster contracts and draws the teeth closer together if possible, and while the heat is the greatest, the teeth are made fast to the plate; the proportion

between the teeth and the arch of the plate is much greater when they are hot than when they are cold, consequently the teeth occupy a less portion of the arch when the job is hot than when it is cold. Now what is the change that takes place in cooling. The plate expands a great deal and it also contracts as much, for the expansion and contraction is always equal and in the same lime, but reverse directions when there is nothing to interfere. The teeth are as close together as they can be, and will not allow the plate to contract in the same lime in which it expanded, and the only way the arch of the circle can be made as large when it is cold as it was when it was hot, is by the ends of the plate coming together, and this is the only way I have my plates to spring. That the teeth are drawn together by cooling is evident, from the chipping or scaling off of the gum when they have been ground so as only to allow the edges of the gums to touch, and it sometimes happens that the teeth themselves will be broken by the lateral pressure; this often happens if we attempt to pull the ends of the plate apart.

Now that I have attempted to explain the cause of plates springing, I suppose I should endeavor to show some mode to prevent it. But I am not able at present to give any plan that will effectually overcome the difficulty. If some Dentist will make known some certain remedy, he will confer a great benefit on the profession.

The precautions I take to prevent the plate from springing, are first, I mix a large portion of sand with the plaster, not that the sand will keep the plaster from shrinking, but it keeps it from breaking and drawing out of place; next I take a piece of thick iron wire, as thick as a large goose quill, and bend it so that it will lay in the cavity of the plate, on the palatine surface. This was recommended to me by an eminent dentist of this city. I don't know who first adopted it, but since I have heard of it I have used it; it can do no harm, and I have thought sometimes it does a great deal of good. If it acts at all, it must be by the ends being forced apart by the expansion of the metal, and may carry the ends of the plate with them; this will allow the ends of the plate to approach each other in cooling, and yet still retain its original shape; if it does no other good, it makes a firm foundation for the plate to rest upon. This wire is laid in the cavity of the plate, which is then filled up with plaster.



I also, after I have ground and arranged the teeth on the plate, take them off and paste a piece of common writing paper on the sides where they touch each other, so as to have one thickness of paper in each joint. This paper all burns out and the space I find closes after the teeth are soldered. It does, in a great measure, prevent the scaling of the gum, which, in some cases, is almost as bad as the springing of the plate.

These are the only precautions I now take. I have tried every thing that I have thought or heard of, and have abandoned them all except the above. My plates spring some, but I generally manage to get them back so as to fit tolerably well. I very seldom have to make a job over on account of the plates springing. To get them back to their shape, I place them on the plaster cast, hold them firm and use a hammer that weighs about an ounce, a few smart blows are all that is necessary. If this don't do, I make a lead cast, as recommended by a writer in the News Letter; but I only make my cast to cover the plate on the inside of the teeth, without touching the stays, then place the job on the zinc cast, and a smart blow with a heavy hammer generally brings it back to fit pretty well.

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#### EXTIRPATION OF THE RIGHT SUPERIOR MAXILLARY.

By DR. PANCOAST, *at the Clinic of the Jefferson Medical College, Philadelphia, Saturday, February 7th, 1852.*

REPORTED FOR THE NEWS LETTER BY J. H. M'QUILLEN, M. D., DENTIST.

The operation performed upon Frances Wallace, reported in the January number of the News Letter, proved as Dr. Pancoast anticipated. For a time the growth of the tumor was held in abeyance, but as soon as the collateral circulation was fully established, it progressed as before, and if the resection had not been made, it is most probable that her life, in the course of six months, would have been terminated by the growth of the tumor upwards, which was in contact with the cribriform plate of the ethmoid bone, and would, (as revealed by the subsequent operation,) soon, if it had not already, produced pressure of the brain. The pulsation in the tumor was however checked, and prepared the way for the excision of the jaw with less probable loss of blood. Thus every measure having been tried in vain to arrest its progress, extirpation was determined upon as a last resort.

Fully convinced of the necessity of the operation, and anxious that it should be performed, (for she had been sent to her home in the country and returned voluntarily,) the patient was seated in a chair with her head supported by an assistant. This position was preferred on account of the hemorrhage which unavoidably accompanies an operation of this kind, and proves very troublesome if the recumbent posture is assumed, from the blood flowing into the throat.

Every thing being arranged, an incision was made through the integuments under the right eye, extending from a little beyond the external to near the internal canthus. This was done without wounding the conjunctiva, and left the lower eye-lid entire. A vertical incision was carried from the inner end of this through the *alae* of the nose at its connection with the cheek, and through the lip just over the canine tooth. It became necessary, owing to a hemorrhage of some moment, to ligate two of the anastomosing arteries; the *coronary* in the lip, and an enlarged branch of the *ophthalmic* which joins the *angular*. The flap was then dissected back, and the entire cheek turned aside in the direction of the ramus of the lower jaw; fully exposing the *maxilla* and *malar* bones of that side.

The plan pursued in this case is preferable to the semi-lunar incision of Dr. J. C. Warren and Velpeau, which extends from the "external edge of the orbit to the angle of the mouth." In the latter mode the knife divides the duct of Steno and the ramifications of the Portia Dura or Motor nerve, paralysis of the side of the face operated upon following, the last as an inevitable consequence; whereas in the former, the duct and nerve are left uninjured, and after the parts are re-united, the natural expression of the face remains.

With the handle of a scalpel the periosteum was then detached from the floor of the orbit, so that after the removal of the bone it would be left entire, and support the globe of the eye. The next thing to be done was to destroy the strong points of attachment existing between the *maxilla* and surrounding bones — This was commenced by severing the connection with the *malar* bone, by a narrow-bladed saw. The right wall of the nose (which had been cut through at its root by the vertical incision along the *alae*) was lifted up, and the cartilage divided with a



scalpel, as far as the *nasal* bone; the *nasal* and *orbital* processes of the *maxilla* and the *os unguis* was then divided by the cutting forceps, one blade being pushed into the nostril and the other under the detached periosteum of the orbit. The left central incisor was next removed, and the two *maxilla* similarly incised along the line of the palate suture, by the cutting forceps, including in this incision a part of the *palatine* process of the *palate* bone. Passing a knife behind the *maxilla*, the second branch of the fifth pair of nerves was divided. To destroy the connection with the *palate* bone and *pterygoid* process of the *sphenoid*, still remained to be done. Passing a heavy bladed knife (shaped somewhat like a chisel) from the floor of the orbit, between the *maxilla* and *pterygoid* process, using the knife now as a lever, and, prying it downwards and forwards, the bone was easily loosened. Grasping it with the right hand by its *palatine* and *orbital* surfaces, it was gradually removed by an oscillatory motion. The hemorrhage which, up to this time, had been quite profuse, almost entirely ceased; a few small vessels, which were bleeding slightly, were ligated, and then the patient was placed upon the table, as she was quite exhausted.

The wound was not closed for half an hour; by that time it had become glazed by the effused plasma, and the capillary hemorrhage had stopped. The cauterizing irons, which were at hand, heated, it was not found necessary to use. The flaps were brought together by the interrupted suture, except at the lip, where the figure of eight sutures were used. The cold water dressing was applied to promote union by the first intention. This supervened without a bad symptom, and the patient was able to present herself before the class on the following Saturday. By the 28th of February, three weeks after the operation, the healing of the parts was complete. At present, March 29, she is awaiting the construction of an artificial palate, which is being prepared for her.

It may not be inappropriate, in conclusion, to remark that the treatment of the various diseases of the maxillary sinus, demands an acumen and experience which few persons possess. And while the reporter of this article would exact from the Dentist a thorough knowledge of the causes, nature, and treatment of its diseases, he cannot (with all deference to high authority to

the contrary) but consider it the province of the Surgeon rather than the Dentist. When, however, the treatment is undertaken by the latter, it should be in consultation with an eminent practitioner of surgery.

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For the Dental News Letter.

### HINTS TO DENTAL STUDENTS.

If a young man, who thinks of becoming a dentist, feels that he is governed by a desire to follow that pursuit in which he can be most useful, let him consider whether he possesses the following qualifications, which are essential to the successful study and practice of Dental Surgery. 1. A sound judgment, and great patience and perseverance. 2. A good English education. 3. A love for Medical Science, and particularly for the speciality of Dental Surgery. 4. A large share of mechanical ingenuity.

If, after mature deliberation, Dentistry is chosen as a profession, a firm determination should be formed to obtain a *thorough* dental education, before commencing practice. Such an education should comprise:—1. A knowledge of Medicine and Surgery. 2. A thorough knowledge of the Anatomy, Physiology, and Diseases of the Dental Organs. 3. A thorough knowledge of the principles of every operation and manipulation of Surgical and Mechanical Dentistry. 4. Actual experience in the Medical and Surgical treatment of diseases of the Dental Organs, and in the manipulations of Mechanical Dentistry.

Private instruction, Medical and Dental colleges combined, must furnish the best means of obtaining such an education.

The writer of these hints is neither a graduate of a Medical or Dental College, and, like many in the profession, has enjoyed no means of obtaining a dental education but private instruction. But four years spent in the study and practice of dentistry, have *fully* convinced him of the immense importance of obtaining a thorough dental education, before commencing practice, and of the inefficiency of private instruction, alone, as a means of obtaining such an education. He throws out these hints from a desire to promote the interests of the profession, and begs for them the candid consideration of every dental student. A. M. HOOKER.

Bristol, Ct., March, 1852.



## AMERICAN DENTISTS ABROAD.

We had wished to mention the fact that an American dentist was now located at Berlin, the capital of Prussia, one of the prettiest cities of that monarchy; and a recent letter from him, from which we make the following extract, affords us the opportunity, and, at the same time, gives our readers some information as to the difficulties in the way of entering into the practice of dentistry on the Continent, especially in Germany. We trust we shall hear from him often.—Ed.

“I must now tell you that after a great deal of perplexing uncertainty, &c., I have at last obtained permission from the Prussian government to remain in Berlin for several years, and pursue the practice of my profession. This favor has been denied to both English and French dentists, who have heretofore applied and were denied, as was also my own case at first; but it is now granted unconditionally, without even subjecting me to the formula of an examination. It may be of service to some in America to know that no man can practice dental surgery until he has passed a regular examination, and gone through all the forms required in such cases; and no foreigner is allowed to practice either dentistry or medicine unless he become first a naturalized citizen of Prussia, and then pass his examination here before their Professors.

“I applied, when I first came to Berlin, and was informed that the rules were very stringent, and that there was no possible chance of obtaining the sanction of the police, without first becoming a Prussian subject, which, of course, I was disposed to consider rather too much for me to attempt. I therefore adopted another course, and commenced operating in the King’s Hospital, gratis, by the permission of the surgeon. In this way the physicians became interested in the improvements which the American method of treating dental diseases possess over that of their own operators; and the influence of several of the first medical men here was soon exerted in my favor. After waiting until I was sure the Minister of Medical Affairs had been favorably impressed towards me, I made a direct application, through the hands of the American Legation, and in due time (i. e., about two months) received a very satisfactory letter, granting full permission to remain and practice the time I had specified, and

adding that the minister was not unacquainted with the superiority of our method of operating.

"I mention these facts simply that you may see the difficulties of entering into practice in Europe; for, if any young American dentist is willing to go through all the forms of naturalization, and settle down in any of the cities of Europe, I think he can do well; but he must first learn the language, and be prepared to answer all sorts of questions which may be suggested, some of them the most ridiculous you can think of.

"Dr. L. H. Dumont,\* of Brussels, writes me to send him one grain of arsenic, as he cannot get it in that city!!

"Yours, truly,

F. P. ABBOT."

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*On Narcotism by the Inhalation of Vapors.* By JOHN SNOW, M. D. Pamphlet, pp. 92. London: Wilson and Ogilvy.

Dr. Snow's labors have been directed both to the practical application of chloroform and ether, and also to a physiological inquiry into the *modus operandi* of these and other anæsthetic agents. As the result of his experience, he states that chloroform may, when due care is used, be safely employed under all circumstances in which a surgical operation requires to be performed. He considers that chronic disease of vital organs ought not to deprive patients of the benefits of anæsthesia when they have to undergo a painful operation of any kind, as he is of opinion that when carefully induced, it causes much less disturbance in the system than severe pain, and is, in fact, the means of preventing, in a great measure, the shock of the operation. We must remark, however, that we entirely dissent from this view of the subject. He states that he has many times exhibited chloroform to patients having disease of the heart, as well as to pthisical subjects and to persons who had previously had apoplexy, and there were no ill effects in any of these cases. He has also given chloroform at all ages, from three weeks to extreme old age, and states that this agent acts in a very pleasant manner on children. He gives a number of particulars respecting the admin-

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\* The Dr. Dumont alluded to is a student of Dr. Maynard, of Washington, but a Belgian by birth, we believe. He also may be claimed as an American dentist, having studied here, and from practicing on the American method.—Ed.



istration of chloroform in the different kinds of operations. He recommends the patient to be in the horizontal posture whenever the nature of the operation permits of it, and advises that the chloroform should not be inhaled till some time after the last meal, and that the patient should not take any food or drink for an hour after the operation, in order to avoid the inconvenience of vomiting, which is otherwise apt to occur. Dr. Snow always employs an inhaler in exhibiting the chloroform, and argues that it is particularly required with this powerful agent, in order to insure the vapor being largely diluted with air, and thus to prevent its effects being produced with such rapidity as to incur the risk of accident. The fatal cases of inhalation of this agent are quoted, and it is shown that death always occurred in the most sudden manner, and that in nearly all the cases the chloroform was exhibited on a handkerchief.

In the physiological part of his inquiry, the author details experiments on animals with a number of volatile substances, and arrives at the conclusion that their narcotic strength is in the inverse ratio of their solubility in the blood. The substances to which this rule applies all contain carbon, and the rule does not apply to agents, such as hydrocyanic acid, which contain nitrogen as a radical element. Other experiments were performed by the author, on himself, which show that chloroform and ether are exhaled again unaltered in the expired air, after being inhaled, and that it is on this account that their influence so quickly subsides. By a number of experiments on animals, as well as on himself, he also shows that the quantity of carbonic acid gas excreted by the lungs is considerably diminished under the influence of the above agents, which, when long continued, have also the power of reducing the temperature of the body. As the result of his experiments, Dr. Snow arrives at the conclusion that anæsthetic agents, and probably all other narcotics, produce their effects by virtue of a power they possess, when absorbed into the blood, of limiting those combinations between the oxygen of the arterial blood and the tissues of the body, on which the animal functions depend. He considers that this view is confirmed by the circumstance that the narcotic vapors in question have the property of limiting and arresting various forms of oxidation out of the living body, such as that of putrefaction, that of ordinary

combustion, and the slow oxidation of phosphorous. The author concludes by suggesting a somewhat new hypothesis of chemical affinity, to account for the action of these substances in interfering with oxidation, both in the living body and elsewhere, but our space does not allow us to enter upon this part of the subject.—*London Lancet*.

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#### WELDING PLATINA SCRAPS.

Cincinnati, February 7th, 1852.

*Messrs. Editors*:—Permit me, through the medium of the Recorder, to describe an easy method by means of which platina scraps and filings may be united and formed into plates.

Take fine gold rolled into thin sheets, (or foil,) place the scraps and filings upon one, and cover with another sheet of gold, roll them closely together, without borax or flux of any kind, then put them in a crucible, or (that which I prefer) upon a slide in a muffle, and subject it to a sufficient degree of heat to melt the gold, which will unite the scraps. Then, with a hammer, the roll can be beat into a solid piece. If there should be flaws, or disunited portions, envelope it in gold, and again melt, withdraw it from the fire, hammer, and roll it into plate, which, prepared in this way, I find as tough and ductile as the best platina or gold, and susceptible of a more beautiful finish. I send you a small piece prepared in this way, hammered out, one-seventh part of which is gold.

Respectfully yours,

J. ALLEN.

The specimen alluded to appears to be perfectly free from cracks or flaws, and as tough as any platina that we have ever seen, while its color approximates that of gold. Platina is susceptible of being welded like iron, at a white heat, but the great practical difficulty consists in holding the scraps and filings together when heated. The usual plan has been to pack it, in the form of platinum sponge, into an iron ring, and when heated to a white heat, condense it by hammering upon a follower fitted to the ring. When the parts are once united, the mass may be heated and worked like iron, or rolled in a mill like gold and silver. The above plan combines both soldering and welding, and must prove very useful to those who wish to employ platina instead of gold in their work.—[ED. REC.]—*Dental Recorder*.



## AMAUROSIS.

There are other causes of amaurosis besides those to which I have adverted. It has some obscure connection with teething, probably through irritation of the facial branches of the fifth pair of nerves. A physician of my acquaintance, residing in London, has a young son who, on two or three occasions, has caused him great uneasiness, by becoming blind in one eye, without any obvious cause, and with no visible change in the organ; but the blindness, on each occasion, has gone off again, apparently in consequence of the extraction of some teeth which had grown irregularly. I am assured by Dr. Ashburner that such cases are common. Mr. Lawrence relates a very singular instance of *dental irritation*, giving rise to amaurosis. A man thirty years old was suddenly attacked with violent pain in the left temple, near the eye, and in that side of the face generally. The pain continued to recur from time to time, and at length he discovered that he was blind in the left eye. By and by the cheek swelled, and some spoonful of bloody matter were discharged by a spontaneous opening through the lower eyelid, and then the pain subsided; but, after some months, it returned with great severity. The patient then went to Wilna, with the intention of having this eye extirpated, and consulted Prof. Galenzowski, who found the left eye totally insensible to light, with the pupil dilated, and no other visible alteration. He ascertained, however, that the first molar tooth on that side was carious; it had never caused the patient much uneasiness, and the toothache which he had occasionally suffered had not been coincident, in point of time, with the pains in the head and eye. Dr. Galenzowski thought fit to extract this tooth, and was greatly surprised at seeing a small substance protruding from the extremity of the fang. This proved to be a little splinter of wood, about three lines in length, which had perforated the centre of the tooth, and had probably been introduced in using a wooden tooth-pick. A probe was passed from the socket into the antrum, from which a few drops of a thin, purulent fluid escaped. The pain ceased almost entirely, and on the same evening the eye began to be sensible to light. The vision gradually improved, and on the ninth day from that time, after thirteen months' blindness in that eye, he was able to see with it as perfectly as with the other.—*Watson's Lectures.*

ON THE STRUCTURE, ECONOMY AND PATHOLOGY OF THE  
HUMAN TEETH,

*With careful Instructions for their Preservation and Culture, and concise Descriptions of the best modes of Surgical Treatment, equally adapted to the Uses of the Medical Practitioner, the Student of Medicine, and of the Public.* By WILLIAM LINTOTT, Surgeon. *Surgical and Mechanical Dentist*: London, John Churchill, Princes Street, Soho, 1841.

## CHAPTER I.

## ANATOMY AND STRUCTURE OF THE TEETH.

The teeth are inferior in organization, and distinct in their general structure, from the other hard parts of the human frame, and are considered by modern anatomists, with much reason, to be an appurtenance of the tegumentary rather than of the osseous system. They differ from bone in two essential particulars. Firstly, in being produced by secretion from a pre-existing structure; and secondly, in being unpreceded by cartilage, like osseous tissues. The teeth are composed of an *organic* and an *unorganic* substance, are sparingly supplied with blood-vessels and nerves, from which they derive vitality and nutrition, and an exquisitely modified degree of sensibility.

There are three different textures entering into the composition of the structure of the tooth; two of these are peculiar to this organ, viz: the *ivory*, or proper tooth substance, which forms the body and root, and the *enamel*, which invests the crown of the tooth. The third texture, the *cementum*, is analogous to the crusta petrosa in the teeth of animals, and bears a very close resemblance to true bone in its structure.

The first discovery of the peculiar structure of the ivory or tooth bone, originated in that eminent philosopher of nature, Leeuwenhoeck,\* towards the close of the seventeenth century. The investigation then slept for a time, but has since been prosecuted with great perseverance and industry, especially during the

\* A paper, entitled "Microscopic Observations on the Structure of the Teeth, and other Bones," by Leeuwenhoeck, will be found in the Philosophical Transactions for 1678. In this paper he alludes to a "*substantia corticalis*," as existing in the calf, which would appear to indicate his acquaintance with the more recently described cementum.



present decade, by several distinguished physiologists; and their researches, aided by the astonishing powers of the microscope, have been attended by the most gratifying and interesting results.

Among the authorities on this subject, at the present day, the names of Purkinge,\* Fraenkel, Raschkow,† Retyius,‡ Muller; and of our countrymen, Nasmyth, Owen, and Tomes, stand pre-eminent.

It gives me also much pleasure to add, that I have been enabled to verify the results of the labors of these gentlemen by personal investigations, and therefore may be permitted to offer my humble testimony to the accuracy of their views. In these researches I enjoyed the opportunity of employing one of Powell's excellent microscopes, made during the past year.

In describing the form of a tooth, anatomists are in the habit of dividing it into a body or crown, a neck, and a fang or root. The body is that part which appears above the gum, which fulfils the office of mastication, and gives depth and beauty to the mouth. This portion of the tooth is covered, strengthened, and protected, by a semi-transparent crystalline substance, sub-organic, insensible, and of moderate thickness—the enamel.

The neck is that part of the tooth which is embraced by the gum, and upon which the covering of enamel gradually ceases. The remaining portion constitutes the root; it is received into the alveolar processes of the maxillary or jaw bones, where it is firmly retained.

*Structure of the Ivory.*—The microscopic examination of the ivory of the tooth, both in man and animals, shows it to consist of a series of minute fibres, which give off branches from point to point, and terminate in an exceeding delicate arborescent ramification. They are believed to be tubular. The larger ends of these tubular fibres open upon the surface of the cavity of the tooth, while the smaller and ramified extremities terminate at the surface of the ivory. They may, therefore, be regarded as radiating from a centre, which is represented by the cavity for the pulp, towards the surface of the tooth, and in this course they form a series of

\* Purkinge's Researches were published in 1835, in a Thesis, by Fraenkel, entitled "Observationes de penitiori dentium humanorum structura."

† Melemata circa dentium evolutionum.

‡ In Muller's Archiv., for 1837.

delicate undulations,\* which are well seen beneath the microscope, and give the peculiar and beautiful satiny texture to the polished surface of the section of a tooth.

In certain animals the minute ramifications of these tubuli are interspersed with small cells, or corpuscles, which serve as an important analogical link between ivory and true bone. The analogy between ivory and bone is found to increase in proportion as we descend the animal scale, until, in the inferior classes, the structure is more nearly allied to the latter, both in structure and mode of connexion, than to the former texture. I have satisfied myself, that in the ivory of the human tooth none of these corpuscles exist; but they are found in considerable number in the cementum.

The tubuli of ivory, as well as the inter-tubular structure, are composed of a dense dental substance, and each tube contains within its cylinder a quantity of perfectly inorganic calcareous substance, apparently disposed in small, irregular cylindrical masses. I think it probable that this broken appearance of the calcareous contents of the tubuli, may depend upon the drying of the sections; in the decayed tooth it is very remarkable. In the teeth of animals the calcareous matter forms the contained substance of the bone, like corpuscles.

When a thin section of the ivory of a tooth is magnified three hundred times, linear measure, it is seen that the tubuli are separated to a very considerable distance from each other; the inter-tubular spaces being occupied by a transparent and very dense ivory, in which the minute branches of the tubuli find room to ramify. The tubuli of the ivory are about  $\frac{1}{385}$  of a line in diameter; but my readers will best judge of the extreme tenuity of these tubuli, from a remark made by Leeuwenhoeck, in the paper before referred to. Thus he observes: "The whole tooth was made up of very small, straight transparent pipes. Six or seven hundred of these pipes put together, I judge, exceed not the thickness of one hair of a man's beard."

The whiteness of the teeth depends upon the calcareous matter which they contain. This calcareous substance is lodged princi-

\* Professor Retzius, of Stockholm, describes a double series of undulations, the first consisting of very small curves; the second being much larger, and comprehending a number of the smaller curves.



pally in the walls and in the cylinders of the tubuli. The inter-tubular structure also contains calcareous matter, but probably in a different state to that occupying the tubuli; for, under the microscope, it is perfectly transparent, and incapable of conferring a white color on the dental organs. In the course of my microscopical examinations, I have thought that I could distinguish a difference of opacity in the inter-tubular texture of the bluish and semi-transparent tooth, as contrasted with the yellowish and opaque tooth, but in this observation I may have been mistaken.

When the calcareous matter is removed from a tooth by means of an acid, the remaining animal substance is perfectly transparent; but the bulk of the ivory is very little diminished. The situation of the enamel, on the other hand, is occupied only by a thin film of loose, cellular animal substance.

*Structure of the Enamel.*—A microscopic investigation of the enamel of the tooth, developes to our view an incalculable number of minute hexagonal fibres, arranged with beautiful regularity; resting, by one extremity, on the surface of the ivory, from which this interesting structure is separated by a thin layer of membrane, and by the other constituting the surface of the crown of the tooth. When a thin section of the enamel, made transversely to the direction of the fibres, is examined, it presents a beautiful tessellated arrangement of irregular hexagonal plates, formed by the cut extremities of the enamel fibres. Each of these enamel fibres is invested by a thin sheath of membrane, which is divided into a number of small, oblong spaces, by little partitions, sent inward from the internal surface of the membrane; so that when the enamel fibre is closely examined, it appears marked at pretty regular distances by transverse lines, the interspace between each of these lines being occupied by a minute crystalline hexagonal block, and the entire fibre being composed of a continuous series of such blocks. Besides serving after this manner to hold together the different minute blocks composing a single fibre, the enamel membrane retains all the crystalline fibres in close contact with each other; it is intimately connected by its central extremity with the membrane covering the ivory, and by its peripheral extremity with the external membrane of the enamel, the persistent capsule of Nasmuth, of both of which, indeed, it forms a part. This membra-

nous apparatus of the enamel of the perfect tooth, is the rudiment of the enamel organ of the embryo, in the structure of which the crystalline substance was originally deposited.

Although radiating from the internal surface of the enamel towards its peripheral surface, the enamel fibres are not straight throughout their entire extent, but near to their central extremity are variously twisted and curved, and present a peculiar arrangement, and one difficult to describe. I have observed that this disposition is more general in sections of the teeth of animals than in man, but it is always apparent in the human tooth, in those parts of the enamel which form the summit of the crown. Many of the enamel fibres terminate abruptly, by pointed extremities, before reaching the surface of the ivory; and I think it probable that it is the disposition of these shorter fibres which gives the bent appearance, above described, to those which extend through the entire thickness of the enamel.

The external surface of the enamel, forming the crown of the tooth, is not perfectly smooth, as might, from a cursory inspection, be supposed, but is marked by a series of regular transverse ridges, which serve to indicate the successive growth of the enamel from the apex of the crown towards its base; the enamel being formed by a series of thin layers, corresponding with the form of the enamel organ. The internal surface of the enamel, that which lies in contact with the ivory of the tooth, is remarkable for its rugged appearance. When carefully examined, I have observed that this roughness of surface depends upon the presence of a number of small cones, with broad bases, arranged with a certain degree of regularity.

*Structure of the Cementum.*—The cementum is a later production than the two preceding textures: it is absent in the early periods of the formation of the tooth, and is developed only as the progress of age advances. Two opinions are received with regard to its mode of formation; according to the first, it results from the ossification of the investing membrane of the root of the tooth; and, according to the second, it is due to a true secretion from this membrane. I am disposed to believe that the latter is the true explanation of its production.

The cementum forms a thin layer, which invests the entire root of the tooth, from its neck to the extremity of its fang. On



the neck it is extremely thin, and commences at the line of cessation of the enamel. It grows thicker as it proceeds onward towards the extremity of the root. As age advances, a thin layer of cementum is also deposited upon the surface of the dental cavity. This deposit commences upon the upper part of that cavity, and gradually increases with the years of the individual; in very old persons it so completely fills the dental cavity, as to leave behind no rudiment of its previous existence. In the latter situation it is produced by the reflected layer of the periosteal or investing membrane of the fang, which lines the interior of the dental cavity, and constitutes the proper membrane of the pulp. When deposited in this situation, the cementum presses on the surface of the pulp, and gradually occasions atrophy of that structure; or, according to some, (an opinion with which I cannot concur,) the entire pulp hardens by deposition into its texture, and becomes converted into this substance.

The fact, that the destructive effects of abrasion, or wearing down of the teeth, are in a measure obviated by a new deposition of bony matter within the dental cavity, has been noticed by several writers, by whom it has been observed, "that it is first deposited in that part of the cavity towards the worn surface, which becomes gradually more and more filled as the tooth becomes abraded." Also, "that it is undoubtedly from the vessels of the internal membrane that this new bony matter is formed."

In the course of my examinations of teeth, at different ages and in different conditions, I had frequently remarked, in those neither worn down nor abraded, a layer of bone of a darker hue than the adjoining tooth-bone, resembling precisely the bone deposited in abraded teeth, commencing above the apex of the dental cavity, and extending downwards, gradually diminishing until it became lost on the walls of the cavity.

I could find no appearance of this layer in milk-teeth, nor in young permanent teeth; but, in both incisives and molares, of the ages of twenty to twenty-five, it is evident to the naked eye, and its extent increases in proportion to the age of the tooth.

On subjecting a section of a canine tooth of medium age, which presented this appearance, to microscopic examination, I found the deposit to consist of a structure analagous to the cementum of a fang; the characterising cells, or corpuscles, being more

numerous, and differing only from the appearances presented by the external cementum, in the peculiarity that the ramifications of the tubes issuing from the cells were finer and more diversified, some of them putting on an arborescent character.

From these appearances, I am led to conclude, that this layer of new *bone* is secreted by a reflection of the periosteum of the fang over the inner walls of the dental cavity ; and that its development, though probably accelerated by the wearing away of the original tooth-bone, nevertheless constitutes a part of the natural structure of the tooth, and, though delayed until a late period, takes place independently of external causes, such as abrasion, decay, &c.

The cementum approaches in structure very nearly to true bone. Like bone, it contains the corpuscles of Purkinge with their numerous ramifying tubuli ; but it appears to me to differ from true bone in the more numerous and longer tubuli connected with the corpuscles, in the smaller size and less regular form and position of the corpuscles, in the presence of numerous curiously ramified tubuli, and also of numerous parallel curved tubes, which are dissimilar to any thing which I have seen in the ivory of teeth, or in osseous tissue. Moreover, in the cementum of teeth there are none of the laminated lines corresponding with the laminae of the Haversian canals of long bones, so characteristic of bone.

This substance, in old persons, not unfrequently becomes considerably increased in quantity on the fangs of teeth, so as to give them an exostosed appearance. When this morbid change takes place in the teeth of the adult, from irritation of any kind, it is likely to present a serious obstacle to the removal of the tooth.

*Chemical Composition of the Teeth.*—The chemical composition of the teeth, according to the analysis of Berzelius, is:

	Ivory, including Cementum.	Enamel.
Animal matter and water, -	28.0	1.0
Phosphate and fluuate of lime, -	64.0	88.5
Carbonate of lime, - -	5.5	8.0
Phosphate of magnesia, - -	1.0	1.5
Soda, and muriate of soda, - -	1.5	1.0
	<hr/> 100.0	<hr/> 100.0

The proportion of animal matter in the ivory of teeth, as compared with bone, is as 28 to 33 per cent.



*Anatomy of the Pulp.*—If we take any one of the teeth, and divide it longitudinally by an incision with a fine saw, into two equal parts, the body will be found to be hollowed into a cavity of some size, which diminishes gradually as it extends through the length of the root or roots, until it terminates at the extremity of the fang, in the minute opening through which the vessels and nerves enter to supply the pulp. This is the “Cavitas Pulpae,” (the cavity of the pulp,) commonly called the dental cavity. It varies in shape and extent, in accordance with the outward form of the tooth. Its contents present to the eye a soft, pulpy, granular mass, which is made up of a cellular base, enclosing nerves and numerous blood-vessels. This substance, the pulp, was originally the secreting structure of the tooth, and is now the medium by which the changes required by nutrition and sensibility are still maintained in this organ.

The membrane which covers the outer surface of the root, is reflected over the inner surface also, investing the pulp, and forming a complete and exquisitely sensitive lining to the dental cavity. There can be no doubt in the mind of even a superficial observer, that blood-vessels and nerves are plentifully distributed to the dental pulp, and its investing membrane, but that vessels enter by minute branches into the dense structure of the tooth-bone has not hitherto been proved. My own observations incline me to the conclusion, that there is no circulation of fluids through the ivory by means of vessels; but that the requisite nutrition is supplied by the imbibition of fluids from the pulp through the tubuli, which commence by open mouths upon the walls of the dental cavity.

The investigation of these tubes, and of their contents, is a point of extreme importance to the practical dentist. On the solution of the question, as to the manner in which the materials for its support reach the tooth-bone, rest the discovery of the proximate cause of decay, and the knowledge of this would doubtless facilitate and improve the remedial measures adopted to counteract the morbid influence.

The opening at the extremity of the root, through which the vessels and nerves enter to perform their respective functions, is so minute in the perfect tooth, as to be barely perceptible to the naked eye. The extreme tenuity of the vessels themselves, then,

may be conjectured, when it is known that through this opening passes the branch of the artery conveying the pure blood for the nutrition of the tooth, and the stimulation of the nervous substance; the vein which returns the impure blood, and a branch of the fifth nerve to supply sensation, and to these is added by some an absorbent vessel.

The arteries which supply the jaws, and from which small branches are given off to transmit the requisite proportion of blood to the pulp of each tooth, are derived from the internal maxillary branch of the external carotid, one of the large arteries of the neck; whilst the veins by which the blood is returned, terminate in the external and internal jugular veins.

The source and distribution of the nerves which supply the teeth, is a subject worthy of the closest attention of the dentist; for without a good knowledge of the intimate connexion existing between all the organs of the body, inclusive of the teeth, by means of nervous communications, it would be impossible for him to comprehend or explain the innumerable sympathetic, painful impressions and feelings, which occur in the dental organs from this association with other parts of the body.

In addressing the unprofessional reader, for whom this is especially designed, I must content myself by observing generally that the teeth are supplied by branches from a large nerve derived from the upper part of the spinal marrow, and called the fifth pair of nerves, (trigeminus trifacial.) The fifth is the nerve of sensation for the entire face, in addition to the teeth; and it is to this circumstance that we attribute the frequent association of pains of the face with those of the teeth. In truth, in many instances, the nerves supplying the teeth are the first affected, and communicate secondarily a painful affection to the face. And this the more readily results from the circumstance, that the nerves of the teeth, after quitting the jaws, actually terminate by being distributed upon the face. Again, all the important organs of the chest, as the heart and lungs, and all those of the inferior cavity, as the stomach, intestines, liver, spleen, kidneys, &c., are supplied by two large and important nerves, which extend throughout the whole length of the trunk of the body, and communicate, with very few exceptions, with all the rest of the nerves of the system, viz: with those derived directly from the brain and spinal



marrow. By means of these nerves, the sensations of the most distant organs are brought into relation with each other; disease of a part very distant may give rise to tooth-ache, of which we occasionally see instances in the dependence of this disagreeable pain upon pregnancy, or disordered digestive organs; hence, in common parlance, such pains and sensations have been called sympathies, and the nerves themselves the sympathetic nerves.

Such of my readers as may feel curious to explore more deeply the source, distribution, and connexion of the nerves of the system, in relation with the face and teeth, I must refer to an exquisitely beautiful little work on Anatomy by my friend, Mr. Erasmus Wilson—"The Anatomist's Vade Mecum."

Numerous are the instances detailed by authors, and many have come under my own observation, in which nervous affections, the most remote and the most serious, have been induced, and their violence kept up, by the irritation of decayed or unhealthy teeth; many discharges from the mucous membranes are perpetuated by this fruitful source of irritation; many hysterical affections, anomalous pains in the uterine organs, symptoms simulating intermittent fevers, convulsions, palpitations of the heart, &c., &c., may be traced to this origin.

Thus it may fairly be assumed, that by means of this complex communication of the nervous system, the affection of a dental nerve, *the common consequence of exposure of the dental cavity by decay, of pressure upon the pulp, of the presence of loose stumps in the gums, of the accumulation of tartar around the necks of the teeth, or, indeed, of any irritation,* may be accompanied by pain in any part of the head or face, in the ear, or in other more remote parts of the body. It will follow, also, that in many cases of neuralgia, or tic-doloreux, where the symptoms are of a local character, relief may be sought and obtained in the removal of decayed teeth or stumps, or of any other causes of irritation from the gums and contiguous parts.

*Articulation of the Teeth.*—The alveolar process of the jaw is so termed, from presenting in the matured state a series of cavities or cells into which the roots of the teeth are implanted. These cavities correspond in number with the roots of the teeth, each root being provided with respective alveolus.

The structure of the alveolar process is osseous, but differs

considerably from the texture of the maxillary or jaw bone, of which it forms a part, this difference consisting in its inferior density, and its more spongy nature and appearance. It may be considered as being composed of two principal plates, one placed externally, the other internally to the roots of the teeth, with numerous transverse partitions of variable thickness passing between them. These latter circumscribe the alveoli, and at the same time separate the adjoining teeth to a proper distance from each other.

The interior of each alveolar cavity is lined, and so much of each tooth as constitutes the root, is invested by a delicate and sensitive membrane well supplied with blood-vessels. These membranes, although in close contact, are nevertheless perfectly distinct the one from the other, and intervening in this manner between the root of the tooth and the side of the cavity in which it rests, they assist in preventing the shock of severe pressure from being communicated to the jaw. In this action they frequently receive extensive injury, the effects of which, though exceedingly painful, are unimportant as compared with injury to the jaws, and are easily allayed. They also tend to retain the teeth firmly in their position.

The osseous tissue of the alveolar process is of an elastic and yielding nature, and is most admirably adapted to the purpose for which it is designed, namely, the prevention of vibration, enabling the teeth more readily to withstand the shock of forcible action, and allowing their removal, when necessary, without the fracture and injury which must have resulted, had they been composed of a more compact and solid material.

*Anatomy of the Gums.*—The gum is a peculiar substance, possessing all the pliant and accommodating properties of a fleshy organized texture, with a firmness almost approaching to fibro-cartilage. In these particulars it is admirably adapted for the office which it fulfils, clasping the necks of the teeth without any organic connection with them, and resisting the pressure of hard substances introduced into the mouth. The gums are endowed with a low degree of sensibility, but are richly supplied with blood vessels which terminate near to their surface in an intricate capillary plexus.

The surface of the gums is invested by mucous membrane,



which is continuous with the rest of the mucous membrane of the mouth, and, through its means, with the common gastro-pulmonary mucous membrane, which lines the interior of the lungs, and of the stomach and alimentary canal throughout their entire extent. It is upon this continuity of structure that depends the remarkable sympathy which I shall have occasion to advert to in the chapter on diseases of the gums, as subsisting between these organs and the stomach, and with the rest of the cavities lined by the same mucous membrane.

Like the rest of the mucous membranes of the mouth, that which covers the gums secretes from its surface a protective covering or epithelium, analogous to the thin horny layer which invests the exterior of the body, the cuticle.

This epithelium "in the mouth is composed of laminæ of oval vesicles and thin angular scales, both possessing central nuclei. The vesicles form the deepest layers, and become gradually flattened and condensed as they approach the surface."

The teeth derive their support and solidity, firstly, from their insertion into, or articulation with, the alveolar processes of the maxillary bones; secondly, from the close embrace of the gum around a small space between the edge of the alveolus and the terminal line of the enamel; thirdly, from the membranous lining of the alveolar cavity and of the root; and, fourthly, from the mutual lateral pressure of each tooth against its neighbor. It may farther be inferred that some little support is afforded to the tooth by the vessels and nerves which enter it from the bottom of the alveolar cavity, by the minute opening at the extremity of the fang.

*Tartar Glands.*—In that portion of the gum which surrounds the necks of the teeth are situated a considerable number of small sacs, or follicles, which open upon the surface of the gum, and pour out a peculiar secretion containing an abundance of calcareous matter. This calcareous substance is held in solution by the secreted fluid, but becomes deposited by degrees upon the teeth close to their junction with the gum, and constitutes the disagreeable incrustation which is called tartar. The tartar glands or follicles are best seen in the gums of the child at birth, where they seem to serve the purpose of lubricating the gums by their secretion. When these glands sympathize with irritation or

disordered action taking place in the stomach, the secretion contains an excess of calcareous matter, which increases around the teeth in such abundance as to separate the gum, produce absorption of the alveolar process, and thereby loosen the teeth, and cause them eventually to fall out. It is on this account that the removal of tartar by scaling becomes one of the most important of the operations in dental surgery, for *the preservation of the teeth*.

The chemical composition of tartar, according to Berzelius, is the following :—

Phosphate of lime and magnesia,	-	-	-	-	79.0
Salivary mucus,	-	-	-	-	12.5
Salivary matter,	-	-	-	-	1.0
Animal matter,	-	-	-	-	7.5
					<hr/>
					100.0

*Mucous Glands*.—Besides the tartar glands which are situated in the gums, there are numerous minute glands, which occupy every part of the mouth, and are located immediately beneath the mucous membrane. These are variously named, according to their position; some, from lying beneath the mucous membrane of the lips, are called labial glands, (labium, a lip;) those of the cheeks are named buccal glands, (bucca, a cheek;) but the most numerous are imbedded in the hard and soft palate, and are called palatal glands. The whole of these glands pour out a mucous fluid, to lubricate and keep in a soft and moistened state the interior of the mouth; the teeth are, as I shall have occasion at a future page more particularly to show, materially affected in their healthy condition, and strikingly in their beauty of appearance, by the fluids with which they are surrounded. I have, therefore, deemed it a part of my duty to direct the attention of those who wish to protect their teeth, to the necessity of preserving a healthy condition of these fluids.

*Salivary Glands*.—By far the most important, however, as the most abundant in quantity of the fluids of the mouth, is the saliva. This secretion is derived from three pairs of large *salivary glands*, situated in close proximity with the mouth; the largest of the three is placed at each side of the face behind the



jaws, and immediately in front of the ear; hence it is named Parotid, (near the ear.)

The second pair, in relation to size, are situated directly below and under cover of the sides of the jaws; hence they are named sub-maxillary, (sub, under, and maxillar, the jaw,) and popularly the kernels of the ear. The third pair is placed immediately beneath the tongue, and is, therefore, named sub-lingual, (sub, under, and lingua, the tongue.)

The secretion of these glands, the saliva, is poured into the mouth by means of several small openings; the opening of the tube, or duct, of the parotid gland, is situated at about the middle of the cheek. That of the sub-maxillary glands opens on each side of the tie of the tongue; and the sub-lingual glands pour their secretions into the mouth by numerous small openings occupying the same situation.

The office which the saliva is intended to perform in the animal economy, is to assist in the conversion of the food into the state of a soft pulp, by mingling with it during mastication. But being, as I have above stated, one of the fluids brought into relation with the teeth, the latter organs are more or less affected by its healthy and natural condition.

The solid matter contained in saliva is one per cent. in quantity, when freshly secreted, and during a meal it is alkaline; during fasting, and when it has remained for some time in the mouth, and exposed to the action of the atmosphere, it becomes acid. According to the analysis of Tiedman and Gmelin, it contains mucus, salivine, osmazome, albumen, fatty matter, and salts. The salts, according to Mitscherlich, are:

Muriate of Potass,	-	-	-	-	-	-	0.18
Lactate, -	-	-	-	-	-	-	0.094
Soda, -	-	-	-	-	-	-	0.188
Lactic acid,	-	-	-	-	-	-	
Phospate of lime,	-	-	-	-	-	-	0.017
Silex, -	-	-	-	-	-	-	0.015

Salivine is the peculiar animal principle of saliva, and gives to that fluid its peculiar odor. It is one of those quaternary proximate animal principles that contains a large proportion of nitrogen, and is, therefore, highly decomposable.

## CHAPTER II.

## DEVELOPMENT AND GROWTH OF THE TEETH.

*Number of the Teeth.*—In the human being nature furnishes two distinct sets of teeth, the one adapted to the wants of infancy, and the size of the jaws at that period; the other to the uses and increased growth of adult age. The first, or temporary set, (the shedding, or milk-teeth,) begin to make their eruption from the gums at about the seventh or eighth month after birth. They are usually ten in number in each jaw, namely, four front teeth, the central and lateral incisors; two cuspidati, popularly named eye-teeth; and four molars, or grinding-teeth.

There exists considerable variation both with regard to the period and order in which the teeth first burst through the gums. Instances are on record in which children have been born with one or two or more teeth protruding,\* and, on the other hand, cases are not unfrequent in which their appearance has been delayed until the fourteenth or fifteenth month, and even to a much later period. The teeth of the lower jaw precede those of the upper, and the sixth or seventh month may be taken as the average date of their first appearance.

The following table gives the periods, as well as the order, in which the teeth of the first set may be looked for :

From 6 to 8 months,	-	-	-	4 central incisors.
“ 7 to 10 “	-	-	-	4 lateral.
“ 12 to 16 “	-	-	-	4 anterior molars.
“ 14 to 20 “	-	-	-	4 canines.
“ 18 to 36 “	-	-	-	4 posterior molars.

The first dentition of infants is frequently accompanied by severe and alarming symptoms, requiring prompt and cautious treatment. The consequences of neglect or mismanagement may, indeed, prove destructive to life. These cases are entirely out of the province of the dentist, and belong exclusively to the experienced medical practitioner.

*Formation of the Teeth.*—The state of the science as regards the origin and development of the teeth, has been most materially aided in its advance by the diligent and most minute investigations of Mr. John Goodsir, jun., who has published the results of

\*I have now before me the jaws of a child which died immediately after birth. In the upper jaw the two central incisors are distinctly visible; whilst in the lower, one of the centrals has risen fully the eighth of an inch above the surface.



his labors in the "Edinburgh Medical and Surgical Journal," of January, 1839.

An abridged and careful abstract of this paper has been given by Mr. Erasmus Wilson, in the "Anatomist's Vade Mecum," in which all the facts collected by Mr. Goodsir are retained, while their connection is placed in a more concise and simple form. From Mr. Wilson's narrative I have selected such passages as will be likely to convey to the reader's mind a knowledge of this truly interesting subject.

"At the *sixth* week, or a little later, after conception, each jaw of the embryo presents the following appearances, viewed from without inwards:—Externally, and forming the boundary of the mouth, is a semi-circular fold; this is the lip: next is a deep groove, lined by the common mucous membrane of the mouth, which separates the lip from the future jaw; then comes the external alveolar ridge; then another groove, in which the germs of the teeth are developed, the *primitive dental groove*; the next line is the rudiment of the internal alveolar ridge; and lastly, the rudiment of the future palate is seen bounding the whole internally. At the *seventh week* the germ, or papilla, of the first or anterior temporary molar of the upper jaw, is apparent, projecting from the mucous membrane lining the floor of the primitive dental groove. At the *eighth week* the germ of the canine tooth, and at the *ninth week* those of the four incisors, may be seen; and at the *tenth week* that of the second temporary molar makes its appearance, immediately behind the anterior molar; so that at this period the germs of the whole of the ten deciduous, or shedding teeth, are quite distinct in the primitive dental groove of the upper jaw. Those of the lower jaw are a little more tardy. From about the eighth week the *deep portion* of the primitive dental groove becomes contracted; laminæ of the mucous membrane, which line it, are thrown up, which increase in growth, and envelope the papillæ or germs, in follicles—little sacs—with open mouths. By the *thirteenth week* the whole are thus enveloped. From this period to the *fifteenth week*, small membranous processes are developed from the mouths of the follicles, which serve the purpose of opercula, (or covers,) and closing over, convert the follicles into dental sacs. At the same period the papillæ have assumed the shape of the teeth they are intended to produce, and have become pulps.

## DR. TAYLOR ON FILLING TEETH.

*An Address delivered before the Mississippi Valley Association of Dental Surgeons, at Cincinnati, September 10, 1850.*

BY JAMES TAYLOR, M. D., D. D. S.

(Concluded.)

It is needless to say that these conditions must give form to the cavity in either instance; but in the superior molares we have more frequently two distinct cavities: the anterior large and round; the posterior oblong, situated on a suture which marks off a section of the teeth, sometimes one-fourth, one-third or more, running from the back part of the posterior or labial prominence of the teeth, obliquely forward toward the centre of the palital surface of the tooth, dropping, it is true, back of the centre, lining off, as it were, the posterior palital prominence of the tooth. We have then in these teeth, very frequently, two depressions, each becoming the seat of disease and only separated by a small portion of healthy bone. The suture running from the centre back, is often merged in the other, and when decay has progressed far, uniting both in one cavity. When these two decays are separated by healthy bone, strong and firm, they are to be treated as two separate cavities; but if this be not the case and the decays meet, the intervening bone, although but partially destroyed by disease, should be, as far as possible, removed. This is done best with the cutting instruments.

One or two peculiarities occur in the central decay of the bicuspid, which are worthy of note before we further describe the manner of preparing these cavities for the reception of a plug. We have here but the one suture running across the teeth, and this passes from approximal surface to approximal; but the minor or palital prominence of the tooth being placed central, and the labial also being highest in the centre, this suture is sometimes nearly if not quite divided by an elevation which passes from the labial to the palital prominence; thus forming two depressions. This condition of things is met with not only in the superior, but also at times in the inferior bicuspid. Disease often takes place at both these points, and the necessity of one or two fillings will depend on the extent of decay. This form of teeth giving rise to two depressions, should be borne in



mind; for if decay also takes place on the approximal surface, we shall have a compound cavity at times difficult to manage. When I come to speak of approximal cavities, however, I shall have occasion to especially allude to the effect which they exert in the formation of these cavities. All teeth may be affected with cavities on their grinding or cutting surface, forming central cavities; but they require not a separate consideration, as the same treatment would be applicable.

It will be observed from what has been said, that the form of the cavity must often depend on the several conditions already described. The manner of exposing the decay and removing the caries has been alluded to, but the shape of the inner portion of the cavity has not been described; I allude particularly to the walls which bound the cavity. Shall these be perpendicular or shall they be beveling, forming a much larger cavity within than around the margin? Much has been said on this subject, yet I suppose that no one would now contend for an enlargement of the cavity just beneath the margin, forming what is called a neck. The impossibility of properly filling such cavities is acknowledged by every experienced operator. Such a form of cavity, although in certain other locations, *in part* may be admissible and even advantageous, yet in those now under consideration it is always improper. I prefer that the walls of the cavity (and particularly the central) be perpendicular—making the cavity as large within as at the opening, but *not* much larger. The disease should be thoroughly removed. I mean by this, that not only the discolored portion of the tooth should be removed, but all that portion which has been acted upon by the decomposing agent inducing decay. But it may be asked how this is to be determined? The nature of the decay must here be duly considered. Caries assume three marked characteristics as it regards color—black, brown, and that called white. In the black, the carious portion is generally hard, and the bone beneath often discolored deeper than the extent to which decomposition has extended. This discolored bone has not always lost its vitality; not knowing, however, but the discolored portion may have been sufficiently acted upon by the agent inducing decay, to ultimately produce decomposition. It is thought best that it should be removed. This practice, although not always absolutely necessary, yet it is considered safer. Still I prefer a cap of hard discolored bone for

the protection of a nerve to any artificial one that can be made. I think in this variety of decay we should be governed some by the density and sensibility of the bone as it regards the amount to be removed. Solid, well-constituted and healthy bone is as good if not better than any filling which can be introduced, and should never be removed except where it is necessary to give shape to the cavity.

In the brown variety, we have a more softened condition of decay, the dentine less discolored, the line of demarkation between the diseased and healthy portion more distinct, the earthy portion appears to be removed, leaving the cartilaginous, which still adheres to the living structure, and indeed seems as yet not to have lost its own vitality. This decay is more rapid in its progress than the former, yet the portion of the bone which is being decomposed and which intervenes, separating the healthy structure from the softened decay, is thin and much harder to be cut than that which we find in the white variety. This should always be removed; if left, the teeth around the plug will soon become discolored, and if moisture gets in, will soon soften and render the operation useless.

The white variety presents some singular characteristics, differing entirely from either of the preceding. We here generally have extreme sensibility of the bone. This sensibility is not in the decomposed and already softened substance, but is in the part immediately beneath, and which is rapidly undergoing decomposition. I say rapidly, because we generally find this form of disease makes rapid progress. May not this, in part, account for the extreme sensibility of the bone? This form of disease is also more frequently found in the young than the aged. There is therefore less density of bone, more vascularity, and hence we may look for more inflammation. The cartilaginous portion appears to be removed first, at least leaving a preponderance of the earthy matter as decayed substance. This is just the reverse from what is seen in the brown variety. The whiteness of the decay appears to be dependent upon the absence of animal matter, leaving the phosphate of lime in almost a pure state; mixed up it is true with foreign matter, which has lodged in the cavity. Yet when this is removed, we often find a white powdery substance, crumbling beneath the pressure of the cutting



instrument, and are astonished, with our patients, to find the tooth so far gone.

This condition of decay has generally been considered the most difficult to treat. I have heard some dentists remark that "they did not believe that teeth thus affected could be saved." Let me ask why is this so, or rather is this the case? Is it not more attributable to an imperfect understanding of the disease? To the fact that many of our patients thus afflicted are young, rather ungovernable, &c. That indeed but few of our patients with such teeth will hold as firm as is desirable—we have a greater flow of saliva to contend against, we are anxious to give as little pain as possible, and may we not be deceived as it regards the extent to which the disease has penetrated the tooth. Is there not beneath the crumbly, powdery substance a layer of bone which should also be removed? I believe there is, and that unless this is cut away, a few months will find a filling out, or that it is too small for the cavity.

This stratum of bone has so far been injured by the acute state of inflammatory action, that it must ultimately be dissolved. And may it not indeed have absorbed a sufficient amount of some solvent fluid, which must not only decompose this stratum; but as this is done, pass on to the healthy portion? One thing at least is certain, which is, that when this is removed the extreme sensibility of bone is also gone.

There is no variety of decay requiring such thorough work to arrest. I believe that an aching tooth will keep up the disease. It is important in all cases to remove from the mouth all teeth which are causing irritation, and cannot be preserved. Here it is absolutely necessary. But I am digressing somewhat from my subject. I thought it necessary, however, to allude to a few circumstances in connection with the different varieties of decay named, because these conditions should direct us in our operations, and determine the extent to which we should use our excavating instruments. I have not pretended to describe every condition of decay; for time would not permit. We have modifications of these forms of decay; causes exist which may at times blend two or all together. I have seen the white pass into the brown, and the brown to the black.

The cause of dental disease forms of itself a subject of vast

importance to every dentist. We are now, however, only treating of one of the remedies. Enough has been said to give a tolerable idea of the manner of preparing the central cavities for a plug, and much has been here said, too, in relation to the disease, which need not be repeated when we come to speak of the other class of cavities.

The cavity having been prepared for a filling, by the entire removal of the disease, the margin being firm, smooth, and somewhat regular, that is, not notched and ragged, or the edge frail and brittle. The walls extending inward, being as near perpendicular as possible, or if beveling, so as to slightly enlarge the cavity within, yet not so as to form a neck, but the wall to present a continuous plane, so that a fold of the gold may rest against it smooth and straight its entire length.

Let me here draw attention to one circumstance, which, if neglected, will ultimately show itself around the margin of the filling. It is this, that in shaping these cavities, that is in removing the carious portion, if particular care is not taken, the diseased bone just beneath the enamel will not be removed and we will have a neck-shaped cavity, the neck of which will be filled by caries. The decay will generally be found full as large at the entrance of the cavity, immediately under the enamel, as within. A portion of the enamel, yet apparently unaffected by the disease, laps over the decay—this is in the brown and white variety alluded to—may be still unchanged in color; yet with a proper shaped excavator, which can be thrown in under the enamel, it will be found soft or undergoing decomposition. When this is ascertained to be the case, it shows that the enamel has not been sufficiently removed. This diseased bone I generally remove first, and then trim the border to suit; or, as is often the case, cut and trim, until I find this part of the cavity perfected. Just so in the use of the drill; the first one used cannot, and generally should not be as large as the decay, but after using one which will pass in readily, cut the decay from under the enamel; then a larger drill, and repeat this till this part of the cavity is perfected. As I before remarked, however, the first step in the preparation of the cavity, is the breaking down of the enamel which covers the decay, with the cutting instruments, and this is done to the extent necessary thoroughly to expose the disease.



We pass on to the next step in this operation, and this would be the preparation of the gold; for this should be prepared and ready for insertion before the cavity is washed out and dried. I am aware that various plans are adopted to accomplish this object. Some cut the gold in strips of about one-fourth of a sheet; then roll into a cylindrical form, adding strip after strip to this roll till enough is added to fill the cavity—then make a few folds at one end, sufficiently large to be retained in the cavity when put in, till other folds are made with the plugger and forced upon it, filling up by these repeated folds the entire cavity. Others take two or three sheets of gold, lay carefully together, then fold once or twice, so as to get some ten or twelve thicknesses of the foil, then cut in strips as wide as the cavity, leaving these strips all united, then roll up one end into a ball, sufficiently large to be retained in the cavity, then fold in, in regular and successive layers, as much as can be forced into the cavity. This plan, when done by an expert operator, goes far to the accomplishment of all that is desired.

Some difficulties present themselves in the proper introduction of the gold in this manner, let us take for instance a central cavity. You commence with a strip introducing the folded end first, then with your instrument draw up and force in another strip; let this be done with all the care imaginable, and all these strips will not be of one length; some will have been drawn entirely within the cavity, while others will project without. A few *misfolds* of this kind will occasion two things; first, the too rapid filling up of the cavity within for the border; and second, an irregularly compacted surface for the filling, rendering it more difficult to put on a fine finish. The same objections hold good as regards the first plan.

But this condition of things is far preferable to that which often takes place. The first fold or ball is forced into the bottom of the cavity, the next on top of this, and so on, filling up from the bottom to the top. If this plan is adopted, and it certainly is the easier, so far as the filling up of the cavity is concerned, yet what is to hold the last fold of gold? True, this may be worked into (more or less) that which is beneath; yet, if I mistake not, such fillings will generally be found to wear down pretty fast, and be far easier picked out than when the folds are

compacted in the other way. Others again roll up small balls of gold, and force in one after another, beginning at the bottom of the cavity. The great desideratum undoubtedly is to fill up the entire cavity, make the gold as solid as possible, impervious to air or moisture, and so compacted and held together, that one portion cannot be removed without the whole, unless by the aid of a cutting instrument.

That plan which will secure the introduction of the most gold, and best fill up the entire cavity, is certainly the best, and that which experience and long practice has made easiest to one, may be, for the want of this, almost impossible to another. Well do I remember the first filling I attempted to introduce with my foil cut into strips, and with foil such as recommended by one of our best dentists. This foil was rather hard yet adhesive, so that when folded it would stick together—when once introduced, it made a hard plug and bore a fine polish; yet after long and tedious labor, I tore my plug entirely out, and took up my cylindrical rolls. This to me then was *the* plan. But one failure did not discourage me, I tried other foil, and at length nearly threw my rolls aside. Notwithstanding I did this and preferred my gold in strips, yet the objections already alluded to determined me to try another plan, and I commenced this in the central cavities, for I found these, especially in the second molares, superior, also inferior, to be as difficult to fill neatly as any other, which was any thing like as accessible. I commenced by taking my strips, such as I had been using, these I cut, say one-third or fourth longer than the depth of my cavity. I then carefully rolled these into blocks of various sizes, having one sufficiently large to retain its position in the cavity when introduced. The object being to place these perpendicularly in the cavity, and fill up from the farthest portion of the cavity forward; but to do this the ordinary plugging instruments would not answer. For a long time I used a couple of pair of plyers, so shaped at the point, as to resemble the ordinary sharp-pointed plugging instruments used for these cavities. I have now perfected what I call a set of plugging plyers or forceps, consisting of five pair, to these I shall probably add one or two more. The five are made from patterns of instruments most used in general filling. When closed, they resemble at the point these instruments, being sharp at the point,



and so bent as to enter almost any cavity accessible with any instrument. When closed, therefore, they can be used as the ordinary instrument; and are thus often used for compacting the gold as introduced; and so admirably do they answer for this purpose, that in using the strips for filling, I use also these forceps. They possess one advantage over the ordinary plugger, which is, that with them you can catch hold of the strip at any point desired, carry it direct to the bottom of the cavity, and thus secure the desired length of fold. The spring of these instruments is such as to permit them to be closed with slight pressure, yet such as to force the blades some half inch apart when this pressure is entirely removed. They are about five or six inches long, this should be determined by the length of hand, &c. Let us now take, as an illustration of the method of using these instruments, the filling of a central cavity in an inferior molar. The cavity has been prepared, a napkin is held in place around the tooth with the speculum. The cavity has been thoroughly dried by the use of cotton, tissue paper, lint, or some such substance, which will most readily take up the moisture. The foil has been rolled up in blocks to suit the size of the cavity; requiring some four, six, eight, or ten, to fill the cavity, depending on its size. These blocks you have laid perfectly within your reach. You then take a pair of forceps bent at near right angle; with these take first your largest block, place this on end in the posterior part of the cavity, having the cut border of gold, projecting out of the cavity, say one-fourth the depth of the cavity; the other end, of course, resting on the bottom. When this block is to its place, and forced back solid against the posterior wall of the cavity, another next in size is introduced in like manner, and forced back against this; but it must here be remembered that this block will not, as the first, reach across the cavity; hence it should be forced to one side. The third block to the other, the fourth to the centre, and so on until the cavity is completely filled. As each block is introduced it is pressed solidly back to its place, the last block introduced has a portion of the strip unrolled, and as much of this as *can be*, is forced in as a closing wedge. We here see the propriety of having the walls of the cavity perpendicular, so that these blocks will rest solid against them without being bent or broken down. In large cavities,

after the introduction of each, or two or three blocks, a strong plugging instrument is used to force back and down these blocks, and thus give room for the introduction of others. We have here a filling made up of continuous layers of gold, each layer projecting above the cavity. No fold too long or too short; for in deep and large cavities the bottom can and should be first filled up to a level with the shallowest part of the cavity, by the introduction of one or more blocks laid in on their sides, and made perfectly solid. And this I do in all those cavities of much size, and where there is much tenderness at the bottom. A little experience will soon direct the most proper size and firmness of the blocks to be used, also their length. I have found that if properly introduced, and consolidated as introduced, that but little pressure on their ends is necessary to finish the compacting of the gold; yet this part of the operation is very important; as pressure should be made as the tooth will well bear. For this part of the operation a few strong instruments are necessary. These I have constructed in a manner which render them fit only for this purpose. I take the ordinary straight, curved, and flat compressing instruments, but the points are cut like a file; the sides of the flat are also made this way. These are to be used after the introduction of the gold. Two objects are had in view in having my compressing instruments thus made. The first is, they can be held more readily to the place; not being half so liable to slip. Second, they compact and unite the surface, and by a rotary or sliding motion, file off, as it were, that portion of the gold which cannot be forced into the cavity. In the use of these instruments a continuous, straight, heavy pressure is not the most effectual; but the motion should be made so as to rock the instrument, as it were, back and forward on the gold.

Fillings inserted in the manner just described, in central cavities, where these have also been properly prepared, will not wear out by any process of mastication, short of that which will wear the teeth away.

The manner of filling all the central cavities is so near the same that a separate description is not necessary. I shall therefore only allude to a few particulars, which change to a certain extent the manner of introducing gold. Occasionally we have a



cavity too small for entire block filling. When this is the case, I use a small block rolled up on the end of a strip of gold, and force this into its proper place; then, with a sharp-pointed plugger, carry in layer after layer until the cavity is well filled. It is well to have at all times a small strong spear-pointed plugger, to introduce the last folds of the gold. An instrument well adapted for the commencement of a filling, will not always be at all suitable to finish with.

I have alluded to one form of central cavity, which requires at this time a passing notice. This is where the sutures or fissures crossing the molar teeth, particularly the inferior, is the seat of disease; and this follows these sutures to their extremes. But here they dip somewhat deeper than in their entire course; and the disease has here made progress somewhat in proportion to that at the centre. This condition of things will often make one pretty large cavity in the centre, with two, three, or four smaller ones running into this; here taking an inferior molar for example, I should fill the posterior first, second the inner, third the outer, then the centre, finishing on the anterior. I wish always to fill that portion of the cavity farthest from me first; because in this way I retain a perfect view of that portion yet unfilled, and can see that my blocks or folds of gold are properly arranged.

I have not alluded to other instruments than the speculum for holding the tongue in place, and keeping the tooth dry, because I have found none which would compare to this for general use. The corner of a napkin neatly folded, and thrown around the posterior molar or dens sapientia, so that the end shall be on the outside against the cheek, the larger fold then is over the tongue. A pledget or two of cotton may still be forced in around the tooth to be filled, this will absorb any saliva, which might otherwise reach the cavity. This, however, is done after the speculum is placed over the napkin. A description of this instrument is unnecessary, for I believe it is generally used. It is held in place by the patient, and if properly constructed, and placed in the mouth so as to produce no pain when pressed upon, is of incalculable service. It is, however, only applicable to the teeth of the inferior maxillæ. The same difficulty is not generally

experienced in keeping the superior teeth free from moisture, during the operation of filling, yet even here we sometimes meet with difficulty.

Some place a large piece of cotton on the labial surface of the teeth; hold this in place with the fore-finger of the left hand, with the thumb resting against the palatal surface of the tooth; or reverse this order of things when applied to the teeth of the right side. Others use a cheek-holder made of pearl. This at times may answer a good purpose, yet it keeps the left hand too far from the teeth, so much so that it can be of no service in handling the gold. The corner of a napkin used as the piece of cotton, I have generally found sufficient, and full as convenient. Custom in this, as well as in almost every thing, will generally give success and choice of the method used. In the upper teeth, as we advance back in the mouth, difficulty of access and consequently of filling increases. The manner of preparing the gold, of introducing and compressing, has been described. This is applicable to the use of gold; also tin, when used in blocks. But I have generally found this metal in foil to possess so little adhesiveness, that the folds will not well adhere together; hence, when using this article other than in blocks, I have cut in broad strips and rolled in cylindrical form. Of late years, however, it is so little used that I have taken no special pains to test the best method of using it, unless, indeed, a few large fillings inserted in the form of blocks; these soon acquired a solidity of surface, and bore a better finish than I had usually expected from this metal. No amount of labor, however, can make it as hard as gold. After the filling has been introduced and consolidated, the projecting foil must be cut to the proper level, and thus prepared for a proper finish. This is done with files and scraping instruments, so constructed as to accomplish this object with very little trouble. The perfection to which files have been made for this purpose, the warmest gratitude of the profession is due Mr. Murphy, the manufacturer, as well as those of our brethren, who have taken the pains to form, and labor to supply him with the requisite patterns. With these instruments the plug is cut down level with the margin of the cavity; then with slightly blunted pluggers, pressure is made around the centre border of the filling.



The edges trimmed of all roughness. The plug must be trimmed so that the antagonizing tooth will not strike upon it.

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NOTE.—The address on filling teeth will be continued in our next number. Time did not permit a full and complete discussion of this subject. The treatment of sensitive or inflamed bone preparatory to filling; the capping of the nerve, also the killing; with the method of filling thereafter, was not dwelt upon. It was requested that I should carry out the subject in full, and publish in the Register. This, if permitted, will be done; but it will consume more space than can be appropriated in one, or perhaps two additional issues.

J. T.

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*Case of Destruction of the Lower Jaw and of a portion of the Face, under Homœopathic treatment.—Novel Operation.* By Prof. F. H. HAMILTON, M. D.

Martin Neuman, seven years old, was attacked on the 10th of August, 1849, with a mild dysentery. The family were German, and sent for a German Homœopath, who gave him at once small pills, which “looked and tasted like sugar!” also a powder and a solution.

Within seven days from the time the medicines were commenced, salivation began, and small ulcers appeared upon the inside of the mouth, upon the gums, &c. Three days after, the ulceration had extended so rapidly that the lower lip was nearly separated, and in a day or two more, it fell off entirely. Three months later, the greater portion of the lower jaw came away in one piece, being two and a half inches long, and including the whole diameter of the bone with its corresponding teeth. The bone and teeth are now in my possession.

It is a coincidence somewhat remarkable, that the sister, Amelia, several years older, was ill in the same way, and at the same time (it was during the prevalence of the cholera in this city), and took medicines from the same man, viz: solutions, &c., and within one week, she was severely salivated also, and her mouth became ulcerated, but no destruction of bone or of the soft parts ensued.

In January, 1850, the lad was brought to me by his father. The lower jaw was then reproduced through the whole extent of that which had been destroyed, but the teeth were of course not replaced: nor was there a vestige of a lower lip, and even

the bone was thinly and imperfectly covered with integument. His condition was distressing in the extreme, since he could masticate only with great difficulty, and his saliva was constantly pouring upon his chin, excoriating his face and neck, and saturating his clothes.

*First operation for the restoration of the lip*, Jan. 14, 1850, in the presence of the class at the Medical College, I abraded the upper edge of the skin corresponding to the lower lip, to the extent of a quarter of an inch each way from the centre; from either extremity of this horizontal incision, I cut perpendicularly about one inch, and then starting from the lower end of these incisions, I carried the knife outward and downward to the left, and outward and downward to the right, one inch and a half. The two lateral pieces thus marked out, were now dissected from the jaw and slid upward, and drawn together with sutures above the central piece; the lower edge of the lateral pieces thus united were stitched also to the upper and abraded edge of the central piece.

The object in leaving a central piece attached to the jaw, and uniting the lateral pieces above it, was to prevent the lateral pieces, which were to constitute the new lip, from drawing down again by the contraction of the wound below. The plan was original, I believe, and proved successful. The lip, however, became, in process of time, through stretching and shrinking, insufficient; and I made a second operation to increase the depth of the lower lip, and prevent more effectually the saliva from dribbling from the mouth.

*Second operation*, Aug. 28, 1850, at my office, in the presence of Drs. Samuel Carey, Camp and others. My mode of procedure was entirely new, and, as I believe, has established an important principle in this class of operations. The operation was as follows: A single incision was made just under the chin, extending along the lower edge of the inferior maxilla about three inches from side to side. All the integument comprised between this horizontal incision and the upper edge of the lower lip, was now raised from the bone, and the entire mass slid upward until its lower edge was made to correspond with a line just below the upper border of the jaw. Here this edge was made fast to the *periosteum*, by several interrupted sutures. The gaping wound



below was left to close by granulation. The result has been, that adhesion occurred between the lower edge of the flap, thus secured, and the periosteum, and no disposition was afterwards shown in the flap to draw downward as the wound cicatrized; but, on the contrary, the skin from below, that is, from under the chin and the neck, was somewhat drawn upward, and thus between the formation of new skin and contraction from the skin below, the wound closed.

The new principle established is, that *by attaching the skin directly to the PERIOSTEUM, its displacement by cicatrization and contraction is prevented.* Every one who has operated for restoration of the lower lip will see the advantages which this plan offers. There is nothing to which the upper, free border of the new lip can be attached, and there is consequently nothing but the mere transverse tension of the lip, to prevent its descending as cicatrization progresses below. This tendency I sought to avoid in the first operation, by leaving a central piece untouched and adherent to the bone, and then bringing the new lip above it. But this procedure requires a sacrifice of a portion of the transverse diameter of the lip, and is often wholly inadmissible; and always objectionable, if the same end can be attained by another mode. This new mode as we have demonstrated, prevents the sliding downward, without sacrificing any portion of the lid. These remarks are applicable especially to cases of *complete* loss of the lip. Where only a portion is lost, various other methods of supplying the deficiency may be practised; as by stretching the lip, or sliding from the cheeks, or even by an operation of "torsion" from the cheeks.

This idea originated in having observed elsewhere the capacity of periosteum to form skin. I have several times proved contrary to the often-repeated doctrine, that skin may form *de novo*, independent of old skin: as where there has been an extensive destruction of the integuments over a bone—where the parts have been torn away, or have sloughed quite to the periosteum, and consequently, no old skin could have been left from which the new could form, except at the edges; yet in the oasis, and gradually spread outward in all directions. But this has always been where the periosteum was actually exposed, which first becoming white and spongy, has soon shown itself to be a nucleus of a new

skin—in fact, it has become *itself converted into skin*, remaining ever afterwards depressed, immovable, and adherent to the bone at that point.

The result of the case of the lad Neuman is, that he has a lower lip, sufficient to cover the gums and a part of the bodies of a set of artificial teeth which our ingenious dentist, Dr. Harvey, has made for him. The lip is narrow, for we have not yet been able to prevent the contraction and rolling in of the upper edge as it heals, but it would certainly have been much narrower, or entirely lost, if the adhesion to the periosteum had not been effected.

I will not omit to say that by the constant effort to use the lower lip, or perhaps simply by the lapse of time, the lip has very perceptibly lengthened in its vertical diameter during the last six months.—*Buffalo Med. Jour.*

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#### CASE OF OBSTINATE HEMORRHAGE, WHICH WAS FATAL.

BY A. CHAPIN, M. D.

The following case of hemorrhage was read at a recent meeting, before the Middlesex East Medical Association, and by request is furnished for the Journal. This case has been erroneously reported in the papers, under the caption of *bleeding to death from pulling a tooth*.

*Death caused by Hemorrhage from the Gum.*—February 2d, of the present year, I was called in the night to see a lady, Mrs. Lock, of Winchester, bleeding from the gum. It had commenced in her sleep, at a point attached to a stump of the right central incisor tooth, and bled with alarming profuseness. The patient was, to appearance, more than 30 years of age, of an exsanguineous aspect, and much debilitated by the wasting effects of a long and irritating *eczema*, covering her entire system. In a course of medication for subduing this disease, she had used Plummer's pills, which had produced moderate ptyalism, but from which ptyalism she had for some weeks been recovered.

The hemorrhage I readily checked with lunar caustic and the application of a small compress, held in contact by a cork pressed up between the teeth. Some thirty-six hours after, I was called again: the blood had been flowing for some time. The



protruding fang being in the way of making suitable pressure, I removed it, and covered the surface with cotton dipped in a strong solution of sul. copper, crowding it also into the socket; applied a compress, and found it again checked. The following night I was sent for, and found the blood oozing from an extended surface, which had been laid bare by the caustics. From that time great perplexity existed in arresting it. Consultations were held; the most active styptics, as catechu, tannin, matico; also, alum, sul. copper, mur. tinct. iron, were successively applied. Pressure in different ways was thoroughly tried. The gum was repeatedly touched with a pencil of nit. silver, and with the actual cautery, and a ligature was put around a portion, with a hope of enclosing the artery. But all were attended with only temporary benefit. The blood seemed too dilute to coagulate readily, and the blood-vessels too weak to contract.

At length, eight days after the commencement of the bleeding, and when it had flown almost continuously for near a week, it was checked effectually by the use of creosote, applied with a camel's hair pencil and a compress of sponge, aided, no doubt, by the exhausted state of the blood-vessels. Her pulse had then considerable strength; and, though dark sordes had accumulated about the teeth and mouth, though partial coma, jactitation of the limbs, meteorism and general putrescency had supervened, the free use of tonics, stimulants and animal broths sustained, and for a few days seemed to improve her appearance, and gave hope of recovery.

On the morning of the 15th, thirteen days from the commencement, and three days after the suspension of the hemorrhage, she was delivered of twins, of three months advance. The flooding was not unusual in quantity, but was more than—in her weakened state—she could afford, and she afterwards sank with an exacerbation of her typhoid symptoms, and died three days afterwards, on the 17th.

During its continuance, the case was taken from my hands, and for some days was managed by a homœopathist, from Boston, but with no *manifest* result. It will readily occur, that a typhoid diathesis was the probable predisposing cause of its obstinacy.—*Boston Med. and Sur. Journal.*

# THE DENTAL NEWS LETTER.

APRIL, 1852.

*Remarks on Dental Education.* By JOHN TRENOR, M. D.,  
Dentist. New York.

These "remarks" were originally published in the New York Journal of Medicine, but are now given in pamphlet form. They are well written, but their tenor we do not like, being opposed to Dental Colleges, and an over-rating of the importance of a medical education to the dental practitioner.

Without a desire to discuss the principles involved, we may be permitted to dissent from his views; such, for instance, as the following:—

"Under the plea of remedying all these evils, what are termed dental colleges have been recently brought into existence. Conscious of the wants in this branch of the medical profession, and of the obvious inefficiency of a large number of those who appear in the capacity of its practitioners, and a belief taken, if not altogether for granted, certainly without sufficient investigation, that these institutions must necessarily remedy the deficiencies so generally felt and justly complained of, some of the members of the medical profession have accorded to them a degree of countenance and approbation, to which it can be easily shown, that they are by no means entitled. They come before the public with such confident promises and plausible pretensions, and as at present constituted, are so decidedly inefficient, that they are a greater drawback to improvement than if they had never existed. They profess to remedy an evil, which they most effectually and glaringly magnify. They hold out the idea of giving a complete and finished course of instruction on dentistry, while full two-thirds of what should be taught, and that the most important, too, viz: all the instruction which every medical school inculcates in medicine and surgery, it does not enter into their arrangements, nor do they possess the ability, with any degree of usefulness or benefit, to perform.



\* \* \* \* "Where, then, it may be asked, and under what circumstances, can this knowledge be best obtained? Obviously, in a well organized medical school *only*."

These are sweeping assertions, both against the efficiency of dental colleges and the ability of the professors; and wholly unsustained by either facts or arguments.

We all know that students in medical colleges have no facilities offered them to obtain a knowledge of the mechanical department, and but few, if any, opportunities to practice on the living teeth, while dental colleges give not only the theory, but the practice also—opportunities not obtained in private instruction, and surely not in medical colleges. Again, dental colleges give abundant and more satisfactory instruction in dental anatomy, or the organs involved in the practice of dentistry, than any medical colleges do, or can give, under their present organization. In these, dentistry is made the *speciality*, and medicine a collateral; and in medical colleges the reverse will always hold, under the most favorable aspect, and even after a dental chair be added.

We can fully agree with the editor of the Boston Medical and Surgical Journal, who, in his notice of this paper, says, after complimenting the dentists of this country as a body of "excellent men, and certainly very skilful operators:"—"We are disposed to question the absolute necessity of a thorough medical and surgical education for a dentist, as Dr. Trenor urges."

Yet, we would not discourage the attainment of such an education, but recommend it.

As to the lack of ability in the professors of our dental colleges, we will only say, that in all probability the author of the "remarks" will be better able to judge of that after they shall have read his production, and with whom we now leave the matter, with full confidence in their ability both to teach and to defend their respective institutions.

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*Lintott on the Teeth.*—At the suggestion of several friends, and in accordance with our own judgment, we have concluded to re-publish Lintott's little work on Dentistry, believing that it will well repay a careful reading.

## THE LETHEON AGAIN.

We see by the newspapers that Dr. Morton, of Boston, has a memorial before Congress, asking them to purchase the patent obtained by him for the discovery of the anæsthetic properties of ether, and its application in surgical operations.

A Washington correspondent of one of the papers says:—

“The Special Committee of the House, on the memorial of Dr. Morton, for the United States to purchase his patent-right for the use of sulphuric ether, is prepared to report in favor of the purchase. Several unworthy persons have endeavored to claim for themselves the merit of the discovery; but the evidence of Dr. Morton's claims are so strong as not to be susceptible of a doubt. There is every reason to believe that Congress will act upon the suggestion of the Committee, and bestow upon Dr. Morton a suitable acknowledgment for the benefits which he has bestowed upon humanity in the alleviation of suffering, as well as the valuable addition which he has made to science.”

We notice also that Dr. Jackson, who likewise claims to be the discoverer, has put in a demurrer to the whole proceedings, and further, that the citizens of Hartford, Conn., has sent a memorial claiming the discovery for Dr. Wells of that place—now deceased.

We give this as a matter of interest to the profession, without being able to determine to our own satisfaction which is the rightful claimant; for Dr. Jackson, whose claims to the discovery have been, we believe, recognized by various medical associations, both at home and abroad. The question, therefore, to our notion, has not been settled, and legislation now would consequently appear somewhat hasty.

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*The Principles and Practice of Dentistry simplified and condensed.* By R. D. ADDINGTON, A. B., D. D. S.

*Dental Monitor; or, Remarks on the Proper Management of the Teeth, &c.* By F. Y. CLARK.

These pamphlets are designed, we suppose, for general circulation, and will, we think, aid materially in informing the public mind on what concerns their comfort and happiness,—the preservation of their teeth.



*Annual Commencement of the Baltimore College of Dental Surgery.*—We had the pleasure of being present at this commencement, which was held in the Hall of the College Building, on the evening of March 18, 1852. We cannot do better, perhaps, than give the notice which appeared in the "Sun" newspaper of the next day, with some corrections and additions.

"At an early hour indications were given that there would be a goodly attendance of both ladies and gentlemen, and, by the time the exercises commenced, the large room of the building was filled. The Independent Blues' Band was in attendance, and throughout the evening gave evidence of their proficiency by the performance of many of their most beautiful pieces.

"After a most impressive and appropriate prayer by the Rev. B. H. Nadal, Dr. W. R. Handy, Dean of the Faculty, read the names of the graduates, their residence, and the subject of the thesis of each, as follows:—

"Thomas D. Symonton, Pennsylvania—Dental Apparatus of the civilized and uncivilized man. Adalbert J. Volck, Germany—Nerves. Henry J. Stevens, Connecticut—Deciduous Teeth. Francis E. Cloutier, Louisiana—Caries of the Teeth. John A. Cobbs, Virginia—Diseases of Maxillary Sinus. Richard H. Finch, Virginia—Anæsthesia. P. Henry McCargo, Virginia—Caries of the Teeth. Albert A. Cleaveland, Massachusetts—Dyspepsia. Warren Welch, Maryland—Dental Caries. Horace E. Chapin, Massachusetts—Mechanical Dentistry. Stanhope A. Sudderth, North Carolina—Causes of Caries. George Mears, Pennsylvania—Preservation of the Teeth.

"After a piece of music by the band, the graduates were called forward to receive their diplomas, which were delivered by the Provost, Dr. Eleazer Parmley, of New York.

"As the graduates received their diplomas, with the degree of doctor of dental surgery, they were almost overwhelmed with bouquets of flowers, thrown to them by the fair hands of the ladies present. This proceeding was followed by an address from Dr. Parmley, on the general importance of dental education and its necessity. The address embraced a defence of the Baltimore College of Dental Surgery, against attacks made upon it, and upon institutions of a similar character. He advocated the establishment of dental professorships in all medical colleges,

though he contended that still so good an education in this particular branch could not be obtained as in such a college as that whose commencement they were now attending.

“At the conclusion of his address, the band performed another piece of music, which was succeeded by the valedictory address of Dr. Robert Arthur, of Washington City. Dr. Arthur was the first graduate of this college, and received his diploma ten years ago. His address was replete with good advice; much of what was spoken having been derived from his own experience. And if the gentlemen to whom he spoke, pay attention to it, it cannot but enure to their benefit. It was to be regretted that much of the address was spoken in so low a tone as not to be heard in a distant part of the room.

“At the conclusion of the address, the benediction was pronounced by the Rev. Mr. Nadal, and the audience departed, well pleased with the proceedings of the evening.”

When the professors, graduates and invited guests adjourned to the residence of Dr. Bond, (one of the professors,) where a repast was served up, to which full justice was done. With the customary convivialities,—joke and repartee,—some “calling out,” &c., the evening passed, and the “short hours” brought about an adjournment.

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We make the following extract from the report to the American Medical Association, held at Charleston, S. C., 1851, by the standing committee on Medical Literature:

“In the appendix accompanying this report will be found a list of American medical publications issued during the year, so far as they have come to the knowledge of the committee. Some of the smaller essays and pamphlets, included in the list, have been examined. Of these, we may refer to that on ship fever, by Henry G. Clarke, M. D., of Boston, and one on the comparative value of the different anæsthetic agents, by George Hayward, M. D., of Boston, as among the most interesting and valuable of those of a practical character. Among those which attract attention from the recondite nature of their subjects, and the ingenuity and talent with which they have been investigated, are the researches on the Natural History of Death, by Dr. Bennet Dowler, of New Orleans, the Inaugural Essay on Zoo



Adynamia, by Dr. George J. Zeigler, of Philadelphia, and the series of letters on Planetary and Celestial Influences in the production of Epidemics, &c."

THOS. REYBURN,  
WM. M. MCPHEETERS, } Committee.

*Dr. Drake's Discourses.*—This little book of some ninety-four pages, treats of the early Physicians, Scenery and Society of Cincinnati, and the origin and influence of medical periodical literature, and the benefits of the public medical libraries.

The reminiscences and incidents are exceedingly interesting, almost equalling the wildest romance. It comprises a history of the medical profession of that section of country at once entertaining and instructive, and may be read with profit by the general reader, as well as the medical man, although local in character.

*Cases where no Teeth were ever Developed.*—A correspondent, in Alabama, writing us, says in a postscript, "Did you ever see a person, say forty years of age, that had no teeth? At this present time, there is a gentleman in this place, of the above age, who has no teeth, and never had any."

We remember hearing of a similar case in the person of a negro, in Ohio, some 100 years of age, who never had any teeth, and which case seemed well authenticated. These are anomalous cases which rarely occur.

#### BUSINESS NOTICES.

*Gold Foil.*—We have recently had manufactured by a partially new process a Gold Foil, which we feel authorized to recommend for *purity, toughness and adhesiveness*,—three essential qualities in gold foil—and we are desirous the profession should test it. Those who have tried it, pronounce it a superior article. We have also a *superior* article of Tin Foil, which is **CHEMICALLY PURE**.

*Porcelain Slabs.*—We have just received, from England, an invoice of these slabs, made expressly to order, and designed for those who make blocks. They will be found very useful in mixing material. We have two sizes, twelve and sixteen inches square.

JONES, WHITE & McCURDY.

## ARTIFICIAL TEETH.

Our modesty will scarcely permit us to publish the following, yet in respect to our esteemed correspondent, whose opinion we value highly, we cannot withhold it :—

Messrs. JONES, WHITE & McCURDY :

*Gentlemen*—I feel compelled to acknowledge my indebtedness to you for the very prompt and satisfactory manner in which you filled my last order. The lot of teeth you sent me, are the handsomest and most natural in shade and shape I have ever seen, and I believe I have seen the teeth of all the principal manufacturers in the United States. I believe I need not scruple to say, that dentists, at a distance from you, can have their orders filled equally as well, if not better, than if they made the selection themselves. You have made a vast improvement in the shade and shape of your teeth. I believe you have left but little room for further improvement.

With a sincere wish for your further welfare, I remain yours,  
with respect,

B. A. KENNEDY.

Wilmington, N. C., March 16, 1852.

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From the Boston Medical and Surgical Journal.

## EPULIS.

The maxillæ are not exempt from extraneous growths, but they are rarely the seat of malignant tumors. Epulis, *epi oulon*, an hypertrophy of the gum, is the accidental formation to which the jaw is most liable. The tumor displaces the teeth between which it commences, or involves by its extension two or three of the contiguous teeth. The growth at first is indolent and devoid of pain, and increases very slowly. While small it is not liable to hæmorrhage, and gives no inconvenience but from its untoward position; but its increase is not limited, and it may attain an enormous size. When long standing and of great extent, it may become the seat of noisome ulceration or of malignant disease. Its thorough extirpation should not be delayed.

A rare example of this tumor occurred in the case of a colored woman, otherwise of sound health and free from constitutional or hereditary disease. It was situated upon the symphysis of the lower jaw, and at the time of removal had attained a size some-



what exceeding a walnut. The pedicle of attachment was smaller than the tumor, and its substance overspread several of the adjoining teeth. It was deemed prudent in its excision not only to denude the bone, but to remove a portion of the alveolar process. To accomplish this neatly and expeditiously, a pair of bone forceps of a peculiar form were designed, having the cutting part so constructed as to operate in a horizontal direction, making the plane of the incision at right angles with the shaft of the instrument. The removal of a tooth at each extremity of the tumor was followed by two vertical incisions, and the entire growth was removed with but little loss of blood. On inspection, the apodosis justified the protasis. The substance of the excrescence was of a dark pink color and fibrous texture, arranged, unlike schirrus, in curvilinear lamellæ, similar to the coagula of aneurism. It probably contained a large proportion of albumen highly charged with water, shown by its shrinking and corrugation on immersion in alcohol. A cursory examination detected none of the granular matter of cancer, and the arrangement of the stromal layers classified it among the simple non-malignant sarcomatous, or fibrous tumors. Considerable time has elapsed, with no return of the formation and no production of the disease in another shape; these circumstances, with the absence of any constitutional contaminated diathesis, and its exceeding slow increase, make it quite certain that the growth was of the homologous kind—the counterpart of healthy and natural textures.

Transcendental anatomy alone can afford any thing approaching an explanation for the departure from established morphological laws, and the usual structure and constituency of normal accretions. To call an adventitious growth a lesion of nutrition, or perverted nutrition, approaches in no degree the primal cause.

A circumstance worthy of remark in this case, was the unusually irritating effect of the vapor of ether upon the respiratory apparatus. The reflex influence of the par vagum, by means of its pulmonary plexus, upon the laryngeal branches, produced spasmodic contraction of the glottis to such an extent as to suspend respiration and frustrate anæsthetic inhalation. Sometimes failure arises from too sparing administration of ether. A more liberal application will overcome the disagreeable symptoms, and tranquillize the suffocative spasms. Imperfect etherization pro-

duced the usual fantastic effects of partial intoxication rapidly induced. The motor centres, released from the control of reason, uttered unconscionable and antagonistic mandates, which the members found difficult to execute and accomplish; and these bizarre impulses threw the fleshy tabernacle into singular and notable contortions. While the cerebrum "all as frantic, which some believe the soul's frail dwelling place, did, by the idle comments that it made," indicate, in prating lunacy, some most curious traits of the African race and blood. E. SANFORD.

February 13, 1852.

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#### CLOSURE OF THE FISSURES IN THE BONY PALATE.

Dr. Bauer, a German physician and surgeon, brought before the London Medical Society two important improvements in operative surgery, which had been communicated to him by Dr. Buchring, the nephew of the late illustrious Dieffenbach. The first is an operation to effect an organic closure of the fissura palati dura; and it has been successfully performed, more than once, by Dr. Buchring, who appears to be its inventor. Dr. Mason Warren, of Boston, has proposed an operation for the same purpose, to be effected by transplanting a portion of the mucous membrane of the roof of the mouth across the fissure, and mentions some successful cases; but the operation has failed when tried in England, Germany, and in other countries. Up to the present time, only mechanical appliances, by means of obturators, have been used, to prevent the communication between the cavities of the mouth and nose, and the consequent diffusion of sound in speaking. Useful though the obturators may be, yet they are attended with many inconveniences to the patient. In this respect Dr. Buchring's operation deserves high consideration. It may be remarked that he does not operate before the tenth, nor after the twentieth year, the bones being at that time of life in a comparatively elastic condition. The operation is particularly intended for fissures in the median line of the palate, the vomer not being in connexion with either of the edges of the fissure; but modifications may be easily introduced hereafter, to meet those cases where this connexion does exist. A pair of forceps of a peculiar form are required to perform the operation. The patient is to be seated in a chair; the forceps are then introduced into the open mouth, one branch being passed into the



nasal cavity, as near as possible to the alveolar process, while the other is to occupy a corresponding position in the mouth, so as to embrace the palate between the two cutting edges of the forceps. The palate is then to be cut entirely through, the opening made being of a corresponding length to the fissure. It ought not to extend beyond the hard palate posteriorly, and ought to leave its anterior portion entire. This opening is to be made on both sides of the fissure. A piece of leaden wire is then to be passed through one of the wounds into the nasal cavity, and so on, through the other, into the mouth again, where the two ends are to be bent upwards. The wire is to be gradually drawn together, the effect being, that as the edges of the fissure approach each other, the space between the margins of the wounds will become wider; or wedges of soft wood may be extended into the wounds for extending them, instead of the leaden wire. When the edges of the fissure are near to each other, they are to be cut, in order that they may unite as in hare-lip, or caustic may be used to effect the same purpose by granulation. Of course, while this is being done, the same pressure is to be kept up until a complete consolidation of the cicatrix takes place; the pressure being afterwards gradually decreased. The wounds will soon fill up with callus, and close.—*London Lancet*.

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Communicated for the Boston Medical and Surgical Journal.

#### ABERRATION OF DENTITION.

CASE I.—October 16th, 1851, I. W., aged seven years, was presented on account of an indolent abscess, situate on the left side of the chin, over the “depressor labii inferioris,” and immediately below the circle of the “orbicularis oris.” It is unnecessary to give the appearance of the ulcerous opening. The history of the case is this:—Six months previous, the boy was kicked by a sharp-shod horse, which produced the wound on his face; and a physician being called, pronounced it a simple integumentary incision, without fracture of the os maxillary. The wound healed readily on simple dressing, but subsequently suppurated, and continued indolent until the time I saw him. I assured the parents of the child that no doubt some foreign substance was within its confines; but the child being timid, and the parents equally so, I was not allowed to examine it further. I applied a single dyachylon emp., and, on removing it several

days subsequently, a tooth presented itself externally, and was removed, proving to be an incisor of the temporary set, (the fang being entirely absorbed or wanting.) What is singular is, that the mother, at the time of his being kicked, removed one of the permanent incisors, (he having at that time shed all his temporary incisors.) I am of opinion, therefore, that this was a supernumerary tooth, being forced from its alveolar socket by the accident above referred to, and remained enclosed in the integuments until its removal.

CASE II.—Mrs. A., aged 35, presented herself on the 19th ult., and requested me to remove a polypus from her nose, she having been advised by a friend of its dangerous character. On examination, a tumor of an *osseous* character presented itself to view, arising from the floor of the nasal cavity, about ten lines behind the external meatus. I administered chloroform, and seized the dragon by its proboscis, which, on removal, proved to be a tooth, one of the permanent incisors. She did not recollect whether she *cut* all her teeth while a child, neither does she remember receiving at any time in her life any injury in the region of the os superior maxillaria. Query—How came this tooth in the nose?

S. L. HERRICK.

Three Rivers, Mich., March 2, 1852.

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#### LOCAL PARALYSIS IN INFANCY.

DR. SIMPSON called the attention of the Edinburg Obstetrical Society to the frequency of local paralytic attacks during infancy and childhood, and pointed out the following circumstances as the most important points in their history:—

1. The paralysis most frequently seems to affect a single limb—as one leg or one arm—sometimes a few fingers only; occasionally it appears in the form of hemiplegia, affecting one whole side; sometimes in the form of paraplegia. Dr. S. mentioned a case in which the paralysis occurred in early infancy, and affected both lower extremities, the left upper extremity, and the left side of the face, the child, now several years old, being very acute and intelligent.
2. The side of the face, but more particularly the upper and lower extremity, when paralyzed in infancy, do not grow in relative proportion with the corresponding healthy parts; so that, when the individuals affected reach adult



life, the paralyzed extremity appears small, diminutive, and shorter than natural. 3. The paralyzed limb does not appear to want sensation, and the motory muscular power, although greatly diminished, is not entirely abolished. When the local paralysis is seated in the leg, the person hence usually walks imperfectly, throwing out the foot at each step with a flap-like motion, and often with the toes or external surface of the foot somewhat drawn in, as the leg is each time extended. 4. *The disease generally comes on during the first three years of life, and especially during the currency of that morbidly irritable state of the nervous system which co-exists with teething.* Dr. S. had seen an instance in which two children of the same family were affected within a week of each other. 5. The disease generally supervenes very suddenly, sometimes in the course of a single night, and is often, at the time of the attack, accompanied with little or no constitutional derangement; but occasionally it comes on with a fit of convulsions or other symptoms of some temporary cerebral derangement. 6. The affection is frequently first noticed immediately after fever, especially after the eruptive fevers; and occasionally it comes on during the period of convalescence from them. Dr. S. described a case of paraplegia in a child three years old, which came on during the convalescence from scarlatina—the patient going to bed apparently well, and waking paraplegic, and astonished at her own want of power of movement in both her legs. Intestinal irritation in some cases appears to be the exciting cause. 7. When the patients do not recover from the paralysis within a few days after the attack, under antiphlogistic measures (when the state of the system has allowed them,) and careful correction of the condition of the intestinal canal and other functions, the paralytic affection almost always proves chronic, and, indeed, permanent. Dr. S. had seen counter-irritation to the spine, galvanism, &c. &c., employed, but without success. He had seen three instances in which small and long-continued doses of nux vomica had appeared to act beneficially in diminishing the state of paralysis. Keeping all the functions of the body as near the standard of health as might be, friction and bathing of the affected limbs, and inculcating as much muscular exercise of them as possible, seemed to be the principal indications of treatment, when the disease had already passed

into chronic type. 8. The true pathology of the disease was as yet little known, though the affection was of frequent occurrence. No autopsic investigations appear to have been made with a view of ascertaining the state of the brain, spinal cord, and nerves, in the local paralysis of infancy.—*Monthly Journal of Medical Sciences*, Jan., 1851.

#### APHONIA AND OBSTINATE COUGH FROM PROLONGATION OF THE UVULA.

DR. T. C. READY, of Lexington, Mo., records, in the *St. Louis Med. and Surg. Journ.*, Jan. and Feb., 1851, the case of a young lady, who had been unable to speak above a whisper for over four years, during which period she suffered from incessant cough, which she said attacked her after exposure to cold. She had consulted many physicians without relief. Upon examination of the fauces, Dr. R. found the uvula enlarged to an enormous size, about one inch in length, hanging over the rima glottidis, and all the adjoining parts inflamed and engorged with blood. "I immediately came to the conclusion," he says, "that the secret of the aphonia and coughing was an enlargement and prolongation of the uvula, and determined upon excision of the same, which I did, and in ten minutes after the operation, she could speak as loud as any one in the room, and has continued to improve, from day to day, ever since, so much so that she can now sing a tune in as good style as she could before her attack. A slight coarseness of the voice, and inability to execute high notes in singing, is all the difficulty she experiences. It is a curious fact in this case, that out of some half-dozen physicians who had before attended her, not one had ever examined her mouth and throat, and thus overlooked what would most certainly have relieved her years ago."

[In the second number of this Journal, (Feb., 1828,) the late Dr. Physic related a case of obstinate cough, caused by an elongated uvula, and cured by its excision. He also described an instrument devised by him for the operation.

The celebrated Wiseman, in his *Chirurgical Treatise*, published so long ago as 1676, states that a "frequent hawking" and "vexatious catarrh" is often produced by elongation of the uvula; and he relates a case in which he effected a cure by excising a portion of that organ. See book iv., chap. vii., obs. 8.



This condition of the uvula, we are led to believe, is a frequent cause of obstinate cough, and we take this opportunity of inviting anew the attention of practitioners to it.]—*American Journal of the Medical Sciences.*

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*Spontaneous Collapse of the Walls of the Antrum.*—A paper by Mr. White Cooper was read, (and illustrated by a portrait and cast,) of a case of collapse of the antrum. The patient was a respectable young Irish woman, of healthy constitution and strong frame, who, nine years ago, perceived a dusky mark beneath the left eye; after a time this extended down by the side of the nose, and was followed by a sinking of the cheek in that situation; there was, however, neither pain nor uneasiness. After this had existed nearly seven years, gradually increasing in extent, she applied to Mr. Cooper on account of the tear flowing over the cheek. Palliative measures were adopted, and this unpleasant symptom subsided. This was early in 1849, and since that time the sinking of the anterior wall of the antrum has steadily continued to increase, and has now given rise to considerable deformity, the appearance closely resembling that which would have arisen had a large portion of the superior maxillary bone been removed, and the integument sunk. The teeth on the affected side were in a most unhealthy state, and two were removed in 1849, by Mr. Alfred Canton, in the hope that the morbid action might be arrested; but such has not been the case. Mr. Cooper has not been able to find a similar case related in any work.

After the reading of the case, various opinions in respect to its nature were offered. There was no syphilitic taint, and no external injury. It was conjectured that the deformity might be natural, that it was not very uncommon for the left side of the face to be smaller than the right; that it might have arisen from mollities ossium; that the antrum might have fallen in, from the contraction consequent upon the spontaneous cure of a disease in that cavity, by which the anterior wall was dragged inwards; that it might have arisen from falling in of the anterior wall from obstruction of the opening of the antrum into the nasal duct, and consequent atmospheric pressure. None of these solutions, however, were regarded by the author as conclusive or satisfactory.—*London Lancet.*

## NEW AGENTS.

F. H. Griswold, Gold Beater, 13 Beaver St., Albany, N. Y.

J. H. Burton & Co., Druggists, Erie, Pa.

*Rolling Mills.*—We can furnish to order any size of Rolls, at manufacturers' prices. A warrantee for twelve months accompanies them.



## SILVER MEDAL FOR CORUNDUM WHEELS.

We placed some of our manufacture of Corundum Wheels in the last exhibition of the Franklin Institute, and in a note to the Judges claimed to be the first and only party manufacturing them in this country, and further, that they were superior to the English, and sent some of the English along with some of our own manufacture for them to test. The result was a First Premium or Silver Medal.

The following is the report of the committee:—

“Wheels, Slabs and Files for grinding porcelain, glass, &c., made of Corundum, which is considered the substance or principle upon which emery depends for its hardness and consequent utility, made and deposited by Jones, White & Co. The judges, from personal experience, testify to the superiority of this material over emery, for the purpose designated, and for which it will probably supercede the necessity; also, the articles manufactured from this material are superior to those *imported*—A FIRST PREMIUM.”



## PREMIUM TEETH.

We now assume for our manufactures the title of Premium Teeth, believing that we have fairly and fully earned it. We have chronicled in the News Letter, as we went along, the reception of medals as received, and we have now to notice the following awards made us by the Mechanics' Institute, of Baltimore, and the Franklin Institute, of Philadelphia, at their last exhibitions. From each a SILVER MEDAL—FIRST PREMIUMS.

The Committee on Dentistry of the Franklin Institute, in their published report, speak as follows:

"This case is considered worthy of a special notice, for the following reasons:—The exceeding *vital* appearance which the teeth *maintain* when exposed to the *test of artificial light*, the nicely articulating surfaces of the bicuspid and molars, and the distinction between the first and second bicuspid, the first being smaller, thus gradually increasing the size from the incisors to the molars, and rendering the change less abrupt to the tongue. The *manner* in which the *platina pins* are inserted, is also adjudged to be a *decided improvement*. The committee award a FIRST PREMIUM."

What is peculiarly gratifying to us is, that the committees of both institutions consisted entirely, we were informed, of dentists, who, it is to be presumed, are the best judges of teeth.

It were needless for us to say a single word in favor of the teeth, or to give the many testimonials from private individuals in the profession, whose opinions we value highly; as the awards that have been made us by the various institutions and dental associations are deemed abundantly sufficient to prove the quality and establish the reputation of our manufactures.

We give below and on next page cuts of our principal medals.

## GOLD MEDALS.



# THE DENTAL NEWS LETTER.

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JULY, 1852.

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For the Dental News Letter.

## MAKING METALLIC CASTS—SUCTION CAVITIES IN OLD SETS— GILDING WITHOUT A BATTERY.

MESSRS. JONES, WHITE & M'CURDY:

*Gentlemen*:—During my dental experience I have tried a great variety of metals for casts, and have for the last two years used the following, with perfectly satisfactory results:

I mould in sand, and make one cast of zinc and one of type metal. Both should be turned into the moulds when they are on the point of solidifying. I dip the zinc cast into lead, and thus make the *counter* cast for *both* models. The plate is then “struck up” on the zinc cast perfectly, and it is so hard that it does not “batter up” in the least. But, as the zinc *shrinks in cooling*, the plate will be found too small for the mouth. Now the type metal cast comes into use; this *does not shrink* in cooling; and by “striking up” between this and the lead, as a finishing touch, you have a perfect fit, providing your “impression” was correct. Type metal *alone* will not answer, as it is too soft. I purchase of the printers their worn-out types at eight cents per pound.

*To make Suction Cavities in Old Sets.*—It is frequently desirable to make a suction cavity in a set of teeth which has none, or to enlarge the one already made. This can be done in two hours, very simply. Lay the set on a table, with the grinding surface of the teeth upwards. Oil the plate and teeth; then mix up some plaster with salt water and a little sand, and pour it on the plate until the space bounded by the teeth is filled up a half inch above the grinding surfaces of the teeth. When the plaster is hard enough to remove without breaking, take it out, and pare away, or scoop out, that part of the plaster which comes in contact with that part of the plate where you wish to have a suction cavity. The suction cavity is to be made by pressing the plate



into that part which is scooped out; therefore, cut away the plaster just the shape you wish that cavity to take, and cut into the plaster as deeply as you wish the depth of your suction cavity to be. Now replace the plaster; then mix more plaster, in the same way as before, and cover the teeth and every part of the plate with it, *excepting the part immediately above the suction cavity* which you have cut out of the first piece of plaster; lay it on to the thickness of half an inch, at least. When the whole mass is *hard*, take a small hammer, with a convex head, and strike down the plate, exposed, into the cavity, in the plaster, underneath. Do this carefully, and by gentle blows, commencing first in the centre of the plate, and advancing in a circle to the sides. Now cut away your plaster, and you have the suction cavity, and without *warping* the plate in the least. I have formed suction cavities in this way several times, and always with the most satisfactory results. It is a very valuable mode of operating in cases where there has been a shrinking of the alveolar border, and the plate rides on the roof of the mouth.

*Gilding without a Battery.*—Not long ago a professional acquaintance told me that he could gild without a battery; that he paid five dollars for the secret, and would sell it to me for that sum. I did not see fit to accept his offer, but went to experimenting, and in a short time found a way to gild without using a battery. I will now give it to the profession, for I consider it a very great convenience, and would not be without the knowledge for fifty dollars. I think there is no dentist but could use it constantly to good advantage. The occasions will suggest themselves to the minds of all.

*To make a Gilding Solution.*—Take of nitric acid one fluid drachm, of hydrochloric acid two do. do.; put them together in a glass or porcelain vessel, and add sixteen (16) grains of gold, either of foil or plate. Let the gold be of the color which you wish the article gilded to partake of. If you use *plate*, cut it into small pieces. In a few hours the gold will be dissolved. Now evaporate the solution to *dryness*, and you will see a reddish substance on the bottom of the vessel, to which you may add half a pint of clean rain water. Into this put one half ( $\frac{1}{2}$ ) ounce of cyanuret of potassium, which will dissolve, and then you have a *gilding solution*.

When the above quantity is prepared, a pint bowl, with perpendicular sides, is very convenient for conducting the operation of *gilding*, which is done as follows: Clean the article to be gilded with prepared whiting, then take a clean piece of sheet zinc, the size of a half dollar, and connecting it with the article to be gilded by a small copper or platina wire, put both into the solution. In a minute or two you will see that all the metal in the solution has received a coating of gold. Now take out the article and clean it thoroughly with whiting; the *first* coat of gold will mostly come off, but every succeeding one will adhere more and more tenaciously. It is necessary, occasionally, to *remove the coating from the zinc*, otherwise the process will be arrested. If the article is left in the solution *too long* it will become dingy, and must be cleaned with whiting and placed back again. Block tin and soft solder can be gilded as well as silver or copper. If the gilding is *burnished* it will form a hard surface, which will wear a long time. The article must be polished, all that it is intended to be, *before* gilding.

H. S. CHASE, M. D.

Woodstock, Vt., April 6th, 1852.

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For the Dental News Letter.

#### DENTISTS' CHARGES.

MESSRS. JONES, WHITE & M'CURDY:

Not only justice, but the interests of the profession and the good of the public, demand that the dentist should receive a liberal compensation for his services. Every person is justly entitled to such a reward for his labor as shall enable him, by prudent management, to obtain a comfortable support, and lay up something besides.

The men who would make the best dentists cannot be induced to enter the profession, unless there is some encouragement of their receiving a fair remuneration for the time, labor and money it may cost them to prepare for practice. No man can afford to spend the time and money necessary to obtain a thorough dental education, and avail himself of every facility to enable him to practice dentistry to the best advantage, unless he can receive for his operations what may seem to those who consider only the time spent in performing them, a high price.

No dentist, however high his reputation, has any right to



demand exorbitant prices; but every one who desires to see the interests of the profession advanced, should feel bound to take a firm stand for reasonable remuneration.

Experience has convinced me that unless a dentist is well paid he cannot do justice to his patients without doing injustice to himself. There are cases in which it is our duty to operate at reduced rates, or even gratuitously, and no man of generosity would refuse to do so. But let me urge every young dentist, as one of their number, never to operate, except under peculiar circumstances, for any thing less than will enable him to do the best in his power for his patient, while, at the same time, it secures to himself a just compensation.

A. M. HOOKER.

Bristol, Ct., May, 1852.

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#### SPRINGING OF PLATES IN SOLDERING.

The article from Dr. Buckingham in our last number, seems to have agitated this subject anew, and we are glad of it, as much may be still learned by a continued discussion of the subject.

We give below two communications, which may throw some new light on the matter.—[ED.]

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For the Dental News Letter.

#### MESSRS. EDITORS:

In the April number of your paper for this year is an article, written by T. L. Buckingham, M. D., upon springing of full upper plates in soldering. Having myself been tormented by that accident often happening, I am happy to communicate a remedy to any who have not made the simple discovery. Solder only three or four teeth at a time, cover them with a small portion of plaster only. The other parts of the plate can also be covered with plaster, but not connected with this. It is as well to have them in two or more distinct parts. The plaster covering the teeth is all that should be heated to dryness.

Since adopting this method I have not sprung a single plate, and have found much less difficulty in fixing each tooth in the exact place where it should be. If possible, my patient is present at the time of soldering on the teeth. Each time, before fastening on the teeth, I try them in the mouth, adjusted on the plate with wax, the plate and teeth being warm, to prevent the saliva from detaching the wax.

The time required in soldering on a whole set of teeth in this way, is no (or but little) longer, and the perplexity and hard blowing much less.

Respectfully yours,

SILAS SMITH.

Geneseo, New York.

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MESSRS. JONES, WHITE & M'CURDY:

*Sirs* :—Enclosed you will receive \$1.00, for the Dental News Letter, for vol. 4. As soon as convenient I will send you my subscription for vol. 5th.

For a number of months, and indeed during the past few years, I have noticed many articles on the springing of plates, and particularly full sets, in soldering. During the first year of my practice I was troubled much in the same manner, particularly when soldering with the mouth blowpipe. This led me to experimenting, and I now have not had a single case spring for the last three years. Two years since I had a dentist from Rochester with me to assist me for a few weeks. The first full set, or rather upper case, he made, he spoilt in soldering, owing to its springing. I told him my plan, and never after did any trouble occur during his stay with me. But to the plan.

I use in soldering, a sheet-iron vessel, large at the top and about half as large at the bottom. All around the sides, at the bottom, it is full of holes, say as large as a ten cent piece. The cup may be made six inches deep. I fill my cup full of live coals from my furnace, put in the case and solder it. The cup, from its shape, &c., will keep the coals all alive, and assist much in keeping the case hot.

My manner of preparing the case is to take white sea sand, three-fourths or two-thirds to one part of plaster, using only plaster enough to keep it together. This I have used for years, and, as I said, never had a case to spring when prepared in this way. I merely enclose the case in it, putting nothing whatever around, not so much as binding wire. Will some others try, and give their views with regard to the matter? In haste,

M. W. SMITH.

Durham, April 29, 1852.

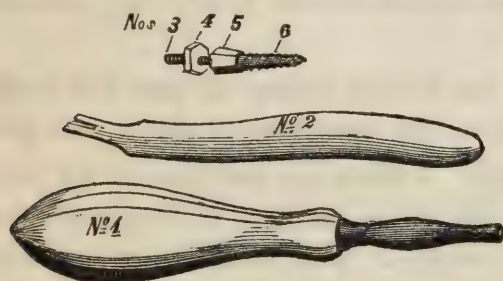


For the Dental News Letter.

## NEW METHOD OF REMOVING ROOTS WITH A SCREW.

MESSRS. JONES, WHITE &amp; M'CURDY:

*Gentlemen:* It affords me pleasure to comply with your request to place an explanation of the instrument used by myself, for extracting the roots of the sixteen front teeth, at your disposal, that you may have a wood cut taken, with the design of placing it in your valuable journal.



With a fine drill enter the root along its nerve cavity, increasing the size of the drill until you get a good opening of tolerably hard bone; then, with one of the screw taps inserted tightly in the handle, No. 1,

carefully cut in a thread with the tap, such as your judgment may advise; withdraw the tap, and follow the thread with a screw of precisely the same thread; seize the screw at No. 5 with a pair of pliers, and, holding it firmly, unscrew the handle; then screw on the nut, No. 4, place a piece of hickory on an adjoining tooth, for a fulcrum; slide the elevator, No. 2, under the nut, resting it upon the hickory, and carefully apply your lever power, and no root can withstand it. I care not how badly decayed—I care not to see a particle of the root from the commencement to the termination of my operation, being sure to see it at last on the end of my delicate screws. I use three taps and three screws, varying in size. My drills are four lip ones, running in a drill stock with a bow, and of about the same size of the screws; but a common square drill will answer.

Of all the roots that I have ever applied this instrument to, I have failed but in two. With these exceptions, and among the hundreds they can hardly be called exceptions, there is no instrument in use less painful, more certain or sure—being entirely independent of any bones beyond the alveolar process. Your tap enters, cutting its way and clearing itself through grooves cut at right angles with the thread, relieving the patient from the pain of forcing forward the bone that is cut, as is the case with the clumsy screw now sold in handles. Mr. J. H. Gemrig, of Phila-

delphia, has got up one of these instruments for my student, at a cost of \$2.25, and I think can supply the profession.

For the valuable principles applied in this instrument, I am indebted to my beloved instructor, Dr. Elliot, of Montreal.

*En passant*, allow me to say to the profession that, like myself, they will have been disappointed in the article for temporary stoppings, to several of whom I sent specimens; and although I have experimented much since, yet a constant press of other engagements has of late stopped them altogether. By and by I shall resume them, and do not doubt finding an article to answer the purpose. I have never used gutta percha for this purpose, as I know it enters largely in Dr. Hill's stopping, and it is to enter my humble voice and act against patents of this or any kind in our profession, that I desire to succeed in this.

A composition of Burgundy pitch and oyster shells will, in the meantime, be found *very valuable* as a non-conductor under a plug encasing a gold cap, and will often accomplish what I have found Hill's fail to do—stop the irritation of the bone. It must be, of course, perfectly protected by a gold plug.

Very respectfully yours,

H. N. WADSWORTH.

Washington, June 1, 1852.

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For the Dental News Letter.

#### REMARKS ON EXTRACTION.

BY A. M. HOOKER.

The operation of extraction, though often performed by the physician and surgeon, belongs properly to the specialty of dental surgery. The dental surgeon, therefore, is inexcusable if he becomes not thoroughly acquainted with its principles, and skilful in its performance. The public suppose him, from his profession, to be expert in extracting teeth, and he has no right to disappoint them.

The performance of this operation is becoming more and more confined to the dental profession, as the public are honoring us with constantly increasing confidence. Let us endeavor to be worthy of this confidence, by laboring to attain the highest possible skill in the performance of the operation. By so doing, at the same time that we are instrumental in lessening the amount of pain endured by our fellow men, we may be lawfully securing to



the profession the benefits resulting from the confidence and consequent patronage of the public. If we attain this skill, we shall deserve this reward; and we may be certain it will be granted, for the public will be sure to appreciate our endeavors to alleviate their sufferings. The patient is not slow to make known his gratitude to him who has skilfully relieved him from the excruciating pain proceeding from the presence of a diseased tooth.

But the highest inducement to devoting our energies to the acquirement of this skill, should be the fact that it will give us power greatly to lessen the amount of unnecessary suffering, now caused by unskilfulness. To be able to extract a tooth with the least possible pain, must be a great satisfaction to a kind-hearted operator.

By the general surgeon the operation of extraction is greatly neglected, which renders it more necessary that it receives the attention of the dental surgeon. The duties of the physician and surgeon are many and arduous, and they may, therefore, be considered excusable for not giving to this operation the attention which it demands. Perhaps they cannot do so without neglecting other duties more important. It is certain no individual can possibly become skilful in every department of surgery, and to aim at this is but a waste of energy.

This operation, compared with many others, is certainly a minor operation; but it is, nevertheless, an exceedingly painful one, and one greatly and universally dreaded. There seems, sometimes, to be as great anxiety and reluctance felt in view of submitting to the extraction of a tooth, as would be felt were amputation, or some equally severe operation to be endured. Men who would resent a charge of natural want of fortitude, seem, in some cases, almost unnerved, and are in a state of most intense and painful anxiety. Individuals will endure days, weeks, and perhaps months, the tormenting and excruciating pains of tooth ache, until their nervous systems are greatly prostrated, rather than submit to the momentary pain of extraction. No small share of this common dread is accounted for, by the fact that a vast amount of unnecessary suffering has been caused by the operation being entrusted to those wholly incapable of operating in a proper manner.

To become skilful in this operation is not so easy a thing as

some may suppose. It requires much study and experience to become master of the operation. The operator sometimes finds all his surgical tact and ingenuity called for to enable him to succeed, and skilful operators have sometimes failed of success.

There are certain qualifications besides a mere knowledge of principles, and skill in their application, which every operator should possess. First, he should have sympathy for his patient. His great anxiety should be to operate with as little pain as possible; but, if devoid of sympathy, he will be likely to be indifferent as to the amount of pain he may cause. Moreover, the patient will more cheerfully submit to the operation, when he feels that he has the operator's sympathy. We all suffer more willingly when we feel that another shares our pain. The patient's respect for the operator is also increased, and he is likely to have the greater confidence in his skill.

A certain degree of firmness of manner is also necessary. Some patients are best managed by the operator's showing them, by his manner, that he wishes them to submit immediately to the operation. The longer they wait the greater is their reluctance. But it is seldom that a patient should be forced to submit. There are cases where children, incapable of being made to feel the propriety of the operation, may be gently compelled to yield. But this must be done in a kind manner, and the patient made to see that it is done from a desire for his best good.

The operator should never lose his patience. If he is unable to master his spirit, he is unfit to operate. Besides, symptoms of anger lower him in the estimation of his patient. People consider it bad enough to have teeth extracted when the operator is pleasant, but still worse if he is cross.

No deception should ever be practiced upon a patient. To be obliged to resort to deception—to say nothing of its moral aspect—looks as if there was a lack of confidence on the part of the patient in the operator's skill. If he does not possess sufficient of his patient's confidence, or has too little power of persuasion, to bring him to submit to the operation, he had better give it up than resort to deception. The dentist who does this must degrade himself in his own estimation, unless he lacks self-respect, as well as in the eyes of the public. His interest, to say nothing of higher motives, demands that he be very careful to do nothing



which shall expose him to a suspicion of practising the least deception in his intercourse with his patients.

The operator should have perfect command of himself under all circumstances. He must never operate with a trembling hand. If the patient sees that he is not perfectly composed his confidence is immediately shaken, and it is of great importance that this be strong; for the operator who has the full confidence of his patient sometimes finds it necessary to use a great deal of persuasion before he can induce him to submit to the operation. This self-command is of the greatest importance. It matters not how well a man understands the principles of an operation, unless he can coolly apply them. There must be that confidence in one's own skill which experience alone can give.

Finally, the dentist must not feel at liberty to rest satisfied with a medium amount of skill, but must feel bound to labor to acquire in this operation, as well as in every other, the greatest possible degree of skill.

Bristol, Ct., June, 1852.

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For the Dental News Letter.

#### HEMORRHAGE FROM THE EXTRACTION OF TEETH.

BY A. BERRY, D. D. S.

The statement of Mr. Fox, that "the best plan or mode of stopping hemorrhage" from the extraction of a tooth, "is by the application of pressure," is undoubtedly correct. It makes little difference whether the material employed for this purpose be cotton, lint, or Dr. B. B. Brown's waxed cloth cones. Nor is it very important in what manner the cotton or lint is introduced, provided it is closely packed.

The operator need not be careful to arm himself with caustics, styptics, or astringents. Is it possible that any of these agents could be made to act on the mouth of the artery at the termination of the socket while the blood is rushing from it, per saltem, so rapidly as to excite fearful apprehensions? Pressure alone should be relied on.

The treatment I prefer to arrest hemorrhage from the extraction of teeth, is the application of balls of cotton, wetting them with cold water to roll them more densely, packed very firmly into the sockets, after removing so much of the coagulum as conve-

nient, commencing with small balls, and using the larger for the last packing. Then apply a compress of cotton cloth, folded of small size, but thick enough to exert pressure when the mouth is closed, and apply the chin bandage to keep the jaws together. The bandage and compress may generally be removed in a short time, and the balls of cotton in fifteen or twenty hours; but if the patient were endemic, or of an hemorrhagic diathesis, it might be well to allow the bandage to remain undisturbed during twelve or fifteen hours, and the cotton for two or three days.

No doubt Mr. Levison, the accomplished dentist of the "Queen of Watering Places," could "tell Mr. Bell" that his mode of stopping hemorrhage would be defeated by the excessive flow of blood in certain cases. It must be a very extraordinary case in which the blood would flow so rapidly as to defeat the efforts of the operator to fill the cavity, even if he were to commence with a strip of lint, pressing it down with a curved instrument, as Mr. Bell recommends. Mr. B says: "I have seen very many severe cases, and some of which the patients had nearly sunk from loss of blood, but I have never seen one in which I have failed to stop the hemorrhage in a very few minutes, by the following process." This process was to remove the coagulum, introduce a strip of lint, press it down until it reaches above the cavity, and apply a compress.

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For the Dental News Letter.

#### CURIOSITIES OF DENTISTRY.

MESSRS. EDITORS:—Here's another item or two on this subject:

*Sensitive Teeth.*—A lady of my acquaintance who wears a few artificial teeth, assured me, the other day, in the most solemn manner possible, that they really ached. Here, thinks I, is an anomaly, surely, and the verification of the result of a too close approximation to nature, which I had read of as occurring to an artist who painted a grindstone so like a block of wood, that when thrown in the river it floated off, thus overcoming the laws of nature, or deceiving nature herself. This last reflection led me to ask her who made the teeth, when she informed me they were made by Jones, White & M'Curdy. Surely, gentlemen, you may now be classed among the best artists; but if this be the



character of all your teeth, I think it would be "more honored in the breach than in the observance."

*Convenient Teeth.*—The following anecdotes remind me of a laughable incident occurring to a dentist in California. He was out one day with his party, prospecting, and toward evening they came across a party of Indians, and encamped with them for the night. During the evening, which they spent in a social manner, combining feats of strength and tricks of various sorts, my friend, the dentist, who wore a set of artificial teeth, determined to surprise them, and, accordingly, dared any one to do as he would; and suiting the action to the word, withdrew from his mouth, with many contortions of face and much apparent pain, his teeth, and then exhibited to the perfectly surprised natives his bare gums. He then replaced them; and after they had recovered somewhat from their surprise, and looking intently on him, they proceeded to try whether his head would come off likewise, being apparently impressed with the idea that he could be disjoined without destroying life. The scene, I was assured, and can readily believe, was peculiarly a rich one. The surprise of the Indians, and the gravity of my friend, holding his teeth in his hand, and then replacing them, was too much for the risibility of the whole party, and they laughed in concert. Teeth serve for many purposes. Yours, R.

*Disclosing the Secret.*—The other day one of widow B.'s admirers was complaining of the tooth-ache. Mrs. B.'s smart boy immediately spoke up.

"Well, sir, why don't you do as ma does? She takes her teeth out and puts 'em back whenever she wants to."

A few minutes afterwards the boy was whipped, on some pretence or other.

*A thrifty farmer* lately went to Brattleborough, among other jobs, to get his masticators improved. The dentist told him that one tooth needed to be filled, when the farmer suggested that, as he had other things to attend to, the operator had better take the tooth out and fill it, so that it might be ready on his return.

Here 's another, decidedly rich:

*A Cool Proceeding.*—A gentleman going down to New York, in a North River boat, last week, missed his tooth brush, and on looking around was astonished to perceive a country gawk apply-

ing it vigorously to his tobacco stained ivories. "My dear friend, you have made a very great mistake in using my tooth brush," said the gentleman. "Your *what?* your brush? You don't mean to say that this here is your *tooth-brush?*" "I do, sir; but it is of no consequence now—you are welcome to the brush." The fellow looked puzzled at first, as if he suspected a trick, but at length he exclaimed: "Here, yeou, take your confounded thingumbob! But I should like to know what in the thunder has become of the *tooth brush that belongs to the boat?*"

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Below, we give an article on dentistry at the "World's Fair," which we copy from the "Dental Recorder;" and we will venture to say that, after reading it carefully, any unprejudiced person will be ready to exclaim with us, "Why all this display in so useful a branch should be overlooked, and passed without the reward of even a notice by the judges, is incomprehensible!" But so it was.—[Ed.]

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#### AMERICAN, ENGLISH, AND FRENCH DENTISTRY AT THE WORLD'S FAIR.

EDITORS DENTAL RECORDER: Gentlemen.—At your request, I will endeavor to give you a list of the articles—especially those from America—connected with dentistry, that were on exhibition at the "World's Fair," with some few remarks thereon. If those few remarks should assume the dignity of a criticism, why, in all probability, I may offend some; but I cannot hope to please all, therefore I will premise that I shall endeavor to speak of each article according to its merits and importance, in all fairness, without prejudice, and leave the intelligent reader to make comparisons and draw his own conclusions.

*Toothwash and Dentifrice*, from J. A. Cummings, Boston. These preparations were neatly put up, but as to their qualities I can say nothing. I noticed, however, much prettier specimens of the same articles in the French department, and which were perhaps quite as good. It was indicative of great ambition, surely, to send such articles from this continent to the World's Fair, and I desire, therefore, to bring the fact before the notice of the profession.



*Dental Instruments.* By far the best display of these articles was made by J. D. Chevalier, of New York. The cameo-handled pluggers were much admired, as were also the forceps. There were several English depositors, the most prominent of which was a Mr. W. Jack.

There is considerable difference in the style of English forceps from our own, the beaks of the former being much shorter and thicker, affording great power, but at the risk of crushing the tooth. Then again, all the instruments used in preparing and filling cavities, are much better adapted to the purpose by our American workmen than any of English manufacture that I saw on exhibition or in private hands. I conceive, therefore, that we are clearly ahead in this line.

*Gold Foil.* The American depositors were C. Abbey & Son, Jones, White & McCurdy, and Ashmead & Hurlburt. I noticed none of English manufacture, and but one specimen from France. Of that from America I will only say it all looked well. The quality of each is too well known here to need commendation from me. The French article was *crimped*, and done so evenly that I supposed machinery was employed for the purpose. What advantage it could be is more than I am able to say. In this department I can say, without fear of contradiction, that we excel the world, and many English dentists tacitly admit the fact by using the American article almost exclusively.

*Plugged Teeth.* Strange as it may appear, there was a small case of natural teeth *plugged*, in the American department, and the only case of the kind in the exhibition. It was marked "from Philadelphia," but no number upon it, therefore it could not be ascertained who it was from; but to judge from the quality of the work, I would say that the person who could fill teeth like them, need not hesitate about giving his name. They were, without question, beautifully done, and challenged the admiration of every one who saw them. I would not be afraid to wager something handsome that the English never saw such work before, nor ever dreamed that such shells of teeth could be plugged.

*Artificial Teeth.* I must divide this branch into three classifications for the sake of clearness. 1st. *Porcelain Teeth.* American depositors were Jones, White & McCurdy, J. Alcock and S.

W. Stockton. The most prominent of the two English exhibitors were Ash & Son.

Of the English teeth I need say nothing, as the style of their manufactures are doubtless well known to most of your readers; but of the American article, I wish to say a few words, especially in regard to their superiority over the English and French.

It is demonstrable, First, that the American teeth are more natural in shading or coloring, and in their translucency. Second, that they are more permanent, when mounted as they are designed to be; and Third, that they are more comfortable to the wearer, than the English or French teeth. Every American dentist who has seen the English or French teeth can freely endorse the above.

Jones, White & McCurdy. The specimens of teeth from these gentlemen, displayed much taste in their arrangement, and were, without question, very natural in appearance.

These gentlemen, whose manufactures I have been familiar with for years, evince untiring energy, and they are entitled to much credit for the improvements they have already made, and to their attention to the wants of the profession.

J. Alcock. The specimens from Mr. Alcock looked well, and ably sustained his reputation.

S. W. Stockton. These specimens were poorly arranged, without taste or judgment; beside, their excessive roughness, (so much so, indeed, that I could readily suppose dirt would find permanent lodgment in the pits or crevices of the enamel) detracted much from their appearance. They were not what I expected to see from him, nor at all equal to specimens of his, manufactured ten or more years ago.

*Block Teeth.* There were several specimens of these, all from America, of course, as but very few of the sort are made in England. S. Wardle, Ambler & Avery, E. Barlow, and D. K. Hitchcock were the exhibitors. Those from S. Wardle were mounted on plates, and displayed some taste and judgment in carving, but looked a little rough both in material and finish, but were very substantial. Those from Ambler & Avery were mounted, and were creditable to the workman, the blocks being well carved, but to my notion rather heavy. Those from E. Barlow were good—were soldered to the plates—their finish was



very fine and brilliant. Those from D. K. Hitchcock were mere show-pieces, being much reduced in size, each jaw in one piece, and not remarkable for either beauty or workmanship.

*Teeth Mounted.* In this line, America, England, and France were well represented. From America, Drs. R. T. Reynolds, T. L. Buckingham, and O. Avery, of Pennsylvania; Drs. E. Barlow and Ambler & Avery, of New York; and W. M. Hunter, of Cincinnati, Ohio. Those from Dr. Reynolds were gum and plain teeth mounted on gold, and were very beautiful, combining strength, beauty of adjustment, and fine workmanship. These qualities, with the neat arrangement of the pieces, made his case attractive, and called forth many well-deserved encomiums. From Dr. Buckingham, there were several specimens of both plain and gum teeth mounted on silver galvanized. They likewise were "hard to beat," and did the gentleman much credit. I must not forget to mention that in this case was shown the whole mechanical process of mounting teeth. The plaster and metallic casts—teeth lined—placed upon charcoal ready for soldering, etc., and from which I dare say many ideas were obtained by some of the profession abroad. Mr. O. Avery's case contained a great variety of work, showing considerable ingenuity in applying spiral springs, also the central cavity plate, and all highly finished.

Mr. E. Barlow. This case contained some very pretty specimens, one plate of single teeth in particular was very elaborate, showing the accomplished and capable plate workman. An ether inhaler in this case, highly polished, induced some inquiries as to its use.

Ambler & Avery exhibited some very creditable plate work. Indeed, there was nothing in this branch from America but what was commendable.

Dr. W. M. Hunter is deserving of a somewhat extended notice in justice to the claimed improvement which he exhibited, and which consists, if I understood his card aright, in uniting single teeth together in one continuous block by a silicious compound, which is fused at a less heat than is required to fuse teeth, and then mounting them by soldering to the plate. By this means he claims to obtain a perfect fit to the plate and a continuous gum without joint, also a much lighter case than with

blocks. If he can do all this, at a less cost of labor than in making block teeth, and accomplish it with a good degree of certainty in each particular case, he is deserving of much credit, and the profession should avail themselves of it.

I would not neglect to notice Dr. A. Hill's stopping, which was exhibited in the case of Jones, White & McCurdy. With this article, the dentists abroad are not quite so familiar as are those of our own country, but I suppose will soon be making inquiries about it, now that they have seen it. This constitutes, I believe, all worthy of mention in the dental department, from our own country. I wish now to make a few remarks on English dentistry and perhaps French, but not to describe either.

The English were fairly represented, but not so largely as might have been supposed. Such an exhibition, held under similar circumstances in our own country, would have shown ten times the amount of dentistry displayed there. Still, their best teeth and best work were to be seen there, and yet how far short they fall in each branch! Their artificial teeth are heavy and clumsy, by being so large and thick, and the manner of attaching them to the plate, so temporary and insecure, beside their abominable bone work, fit only for a barbarous age because of its filthiness, and excusable only when dentistry was in its infancy. Why will dentists who have the honor and character of the profession at heart thus temporize? I can find abundant reasons why those who think of the shillings only should follow this practice, from the fact that a new set of teeth will be required in about twelve months; but this is a short-sighted policy, even in a mercenary point of view. If the prices of dental operations were reduced, as they could be (without the operator's suffering in the least) by using American teeth, two-thirds of the labor would be saved in getting up a set of teeth, and the patient would have a permanent operation that would *not require renewal every year*. Let such work be done, let the people have the assurance that, in indulging in the luxury of artificial teeth, they do not entail upon themselves a heavy annual expense, and I think the inference a fair one, that a much greater amount of dentistry would be required than is now performed. Many, very many, who now never dream of having artificial teeth, would then be induced to call on the dentist, and thus the loss in



reducing the price would be more than met by additional patients and operations; but to come back from this digression. In filling teeth, I doubt much if there be more than a dozen dentists in London (and London is England) who can do a patient justice in the matter of plugging teeth. I do not *guess* this, but base the assertion on observation, pretty extensive and satisfactory, and the information of one who has had good opportunity to judge. I therefore feel free to declare that in plugging teeth, in mechanical work, in the manufacture of porcelain teeth and gold foil, and in dental instruments, we are many years in advance of them. In a word, that the profession of dentistry and all its collateral branches in America, are years in advance of the world. You may think this is a sweeping assertion, but I can assure you the facts bear me out in making it.

Again, while they have not one periodical devoted exclusively to the interests of the profession abroad, we have *five*, all flourishing, and disseminating much useful information; beside, while dentistry is not taught as a profession in Europe, we have, as I learn from the "Dental News Letter," *three* dental colleges in operation, and a charter for a fourth. Now, all this shows clearly and conclusively, that dentistry in this country is an acknowledged distinct profession, and is so taught, while in Europe it has only, I may say, the reputation of a trade; but it should not be so. It is high time something was done there to protect the honorable and capable practitioners (for such there are) from the swarm of mere charlatans, and the line of demarcation were more plainly drawn. Teach the people what they are to look for in a dentist—his functions, and what his abilities should be, and give facilities for the attainment of such qualifications by establishing colleges, or other suitable means of instruction, which will have the confidence of, and be a protection to the public, and the profession will be elevated and its members respected and valued as they should be. It is a marvel to me why this has not been done long since. An effort of this sort was made, I know, some years ago, by Dr. James Robinson, of London, who spent both time and money in endeavoring to sustain a dental periodical; he also made a strong effort to have a dental chair added to the Middlesex hospital. The first fell through, but the latter has been accomplished, I believe; but

this, to my mind, although a step in advance, does not go far enough. A college where dentistry alone is taught, should be established, and I am not without hope that such an institution will be started and sustained, too, in proportion to its usefulness, and the qualifications and energies of such men as Drs. Robinson and Tomes favors the hope. French dentistry is not even worth mentioning, mere pasteboard—a miserable excuse—a libel on the name. All finish—no substance. Abounding in bone work, with some porcelain teeth which might easily be mistaken for split beans, both in shade and shape. If there could be any thing more ephemeral in substance than the French work, it was a case from Switzerland, which was a poor imitation of the French.

This I believe comprises all of interest, and is perhaps all I need say.

I will not venture an opinion as to who were entitled to medals in each branch in the American department, but leave the reader of this hastily-written paper, to draw his own inferences.

Yours truly,

O. D.

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### ACUTE PERIOSTITIS.

BY J. H. M'QUILLEN, M. D., DENTIST.

*Read before the Pennsylvania Association of Dental Surgeons,  
and published at their request.*

*Acute Periostitis*, or inflammation of the membranes investing the alveola and roots of the teeth, is an affection of frequent occurrence; and its local effects are sometimes attended with serious consequences. The various diseases of the antrum, in the majority of cases, can be traced to this as the exciting cause; also, spina ventosa, osteo sarcoma (usually considered a malignant disease), necrosis, and exfoliation, in either maxilla, may nearly always claim it as a common parent. Following these, permanent deformity of the "face divine" has resulted as a sequence.

*Causes.* Destruction of the dental pulp may act as an exciting cause, whether resulting from simple exposure to variations of temperature; acrid secretions of the mouth; compression of the pulp, from lodgment of foreign bodies in the cavity of decay, as



portions of food, or the insertion of a plug ; and, lastly, the exhibition of a corrosive agent, at the hands of a dentist. This, however, is a rare excitant, when the treatment is properly conducted. The destruction of the pulp, not followed by its removal, and plugging the dental canal, but merely filling the cavity of decay, is, in the majority of cases, soon followed by the appearance of this affection. The state of utero-gestation appears to be a condition of the system particularly prone to the development of this affection (when there is a predisposition that way, owing to the pressure of diseased roots and teeth). This is easily accounted for, by the cerebral determination so characteristic of this state. The attention of the writer was directed to this circumstance, several years ago, by Professor J. D. White ; his own experience, since that time, has confirmed the correctness of the observation. It appears, however, to have escaped the attention of dental writers, as none have mentioned it in their productions. And yet, the knowledge of this, is a matter of moment, as by well-timed and judicious operation, much suffering could be spared those who suffer most.

Like inflammation in other parts of the body, this is divisible into three stages, viz : simple vascular excitement, active congestion, and true inflammation.

The first stage, which is simply a hyperemic condition of the capillary vessels of the membrane, the circulation through the part proceeding, at the same time, with unwonted velocity, merely occasions a slight amount of tenderness, which is increased by striking sharply on the affected tooth with the handle of an instrument. A sense of relief is obtained, by gradual and continued pressure upon the tooth ; which, however, on being removed, is followed by a recurrence of the tenderness. At this point, without any attention from the practitioner, the vessels, by unloading themselves, and decreasing to their natural calibre, the part will return to its normal condition. Should the action not cease here, but proceed, *active congestion* is established : the capillaries become more and more distended, until distension is no longer possible, owing to the confined locality of the tissue ; exudation of the liquor sanguinis takes place, to a slight extent ; the most excruciating pain is now experienced, and along with it, intolerance of the slightest pressure. On this account, closure of

the teeth is avoided, as it but aggravates the evil. The tooth seems longer and looser than its neighbors—and such is really the case; for, owing to the distension of the blood-vessels of the membrane, the root is forced slightly out of its socket. The pain is sometimes intermittent in its character, but in the majority of cases is continued; an increase of it is, however, experienced by nearly all towards evening. This is attributable to the febrile exacerbations. By proper and active treatment, the action may possibly be arrested even here. This, not succeeding, or being attempted too late, it advances to *true inflammation*. Effusion of plasma takes place to a greater extent than in the previous stage; stagnation of the circulation through the part occurs; in the surrounding tissue, on the contrary, it is going on with increased activity. The pain is lancinating in its character, owing to the efforts of the blood on the cardiac side to overcome the obstructing mass; the gums are very much swollen, excessively tender, and unnaturally red; the side of the face on which the affected tooth is situated, becomes edematous, and increases to an unnatural size. After this has continued for a shorter or longer period, *suppuration* takes place, by *disintegration of the effused plasma*. The abscess is generally situated at the apex of the root. It usually makes its escape from the socket by the opening effected through the thin parieties of the alveolus, on the buccal side, though sometimes the lingual. A place of exit being thus procured, the abscess advances through the gum, and arriving at the surface, evacuates its contents into the mouth. Under favorable circumstances, this is followed by a cessation of pain, and a restoration of the part involved to a healthy condition. Such a favorable termination is not always to be anticipated. The abscess may open into the antrum, or even when it has made its way to the gum, it may not approach the surface, but burrow, and thus the consequences alluded to, may result, if an opening is not made quickly and boldly by the lancet.

*Treatment.*—Should the tooth be a valuable one, with the prospect of future usefulness, every effort should be made to save it. The practitioner should always bear in mind, and impress upon his patient, the fact that even after the part has been restored to a healthy condition, that it is liable at any moment to take on inflammatory action. As it is an axiom in surgery, that



a part which once has been truly inflamed, leaves that part much more susceptible to the action of exciting causes, and hence is more liable than healthy tissue to become the seat of subsequent disease. Having decided to save the tooth, the treatment in the first and second stages is somewhat analogous, the only difference consisting in its being more active in the latter than in the former. Slight scarification of the gum, cold or warm water (as is most comfortable to the patient) held in the mouth, may suffice for the first; but the application of two or three leeches to the gum will be imperatively demanded, to prevent the establishment of the inflammatory acmé in the second. Now, the idea of having a leech placed in the mouth, is repugnant to the feelings of all, and particularly the over-sensitive. It therefore affords the writer much pleasure to invite your attention to a recent invention of a French gentleman, which is called an artificial leech. It consists of a glass tube or cylinder, with a piston fitting accurately, and attached, by means of India rubber, to a piece of horn, situated at the upper orifice of the tube; the horn is perforated through its centre, to admit a small steel rod, by which the piston is forced down to the lower orifice. Applying it now to a gum recently scarified, and removing the rod, the India rubber contracts and draws the piston to its former position; a vacuum is thus formed, into which the blood flows freely, owing to the removal of the atmospheric pressure, and consequent distension of the blood-vessels. As much blood can thus be removed as the practitioner may deem necessary. Having used it and found it to answer the purposes indicated, I can vouch for its utility.

As a case in point, Miss T——, a lady of an excessively nervous temperament, called upon me to have a lateral incisor of the right superior maxillary plugged. In removing the decay, the pulp was found to be exposed. Forthwith, the arsenical paste was applied, to destroy its sensibility. At the expiration of eighteen hours, the pulp was removed; there was a slight hemorrhage from the upper part of the dental canal, but no painful sensation was experienced by the patient, either from the introduction of a fine and flexible probe, passed up the canal as far as practicable, or upon striking the tooth sharply with the handle of an instrument. Introducing a pledget of cotton into the pulp

cavity, and packing it firmly, so as to arrest the slight amount of hemorrhage—thus preventing the imbibition of the coloring matter of the blood into the tubuli, and consequent discoloration—the patient was directed to call the next day. On the following day, the bleeding had ceased; the dental canal and cavity of decay were then plugged with gold foil. Owing to the temperament of the patient, and the fact of her being under treatment for a neuralgic affection of the eyes, I still, notwithstanding the absence of the slightest sensibility, apprehended the establishment of some irritation, and therefore requested to be informed, if pain supervened, as soon as possible. At the expiration of four or five days, the patient called and told me that the night before, she had been attacked with a slight pain, which had augmented in severity until it had become almost insupportable. The artificial leech was applied, and from one to one and a half ounces of blood removed. The application of cold water to the part, to be continued for some time, was then advised. This plan was followed by the happiest effects.

When, however, the third stage is established—indicated by the puffy condition of the gums and face—*resolution* is no longer practicable; depletion, therefore, is not admissible, as it retards the suppurative stage—the indication being to promote this as speedily as possible, and relieve the sufferer of the intolerable pain. Emollient poultices applied to the gum, as roasted figs, or flaxseed enveloped in a gauze sack, will be found very serviceable in this stage. The domestic practice of enveloping the entire side of the face in a huge poultice, cannot be too highly deprecated, as it has a tendency to induce the abscess to point at the surface of the cheek, and possibly open through it. Many persons carry a scar there, as an evidence of this injudicious custom. Two or three days will generally suffice for the formation of pus; therefore, a practitioner who will allow his patient to go an entire week, without attempting to effect its evacuation by the lancet, is culpable in the extreme.

On Friday, October 17th, an Irish laborer presented himself at the office, with the right side of his face very much swollen, and complaining of considerable pain. Upon requesting him to open his mouth, I found that he could only separate the jaws, sufficiently to introduce the little finger between the teeth.



Requesting a history of the case, the following was given: A week previous, an unsuccessful attempt was made to extract the dentes sapientiæ of the inferior maxillary, right side. During that night, the pain became lancinating in its character, and on the following morning, the face presented the edematous appearance described above. Thus a whole week had been passed, of intolerable suffering—the person, at the same time, being incapacitated for the performance of his daily avocation. It was plainly perceptible that the abscess was pointing towards the surface of the cheek. As no time was to be lost, a free incision was made internally with the lancet, which was followed by a profuse discharge of pus. A small piece of cotton was then placed in the wound, to keep its lips patulous, and also to act as a tent, to drain off the pus that otherwise might accumulate in the abscess, and necessitate the use of the lancet again. The patient was requested to call in a few days, to have the roots removed. At the time specified, they were extracted without any difficulty. The pain had disappeared, and the face had resumed its natural expression. In conclusion, the writer would cite a case of malpractice, that came under his notice about five years ago, whilst in the office of his preceptor. The patient, in this case, was by occupation a cab-driver, and therefore exposed to all the inclemencies of weather and variations of temperature. The history of the case was as follows: A second molar of the inferior maxillary, left side, was attacked with periostitis, and resulted in the formation of an abscess. Owing to the application of one of the huge poultices alluded to, it pointed externally. At this crisis, he called upon a druggist, who lanced it *externally*, and in the course of a few days, applied a plaster, to promote the healing, and closure of the wound. This, however, proved futile, and on the contrary, a fistula was formed, through which the pus exuded. This continued four or five weeks, when the patient was advised to call upon my preceptor. Looking upon the tooth as the cause of all the mischief, he at once removed it; this was followed by a disappearance of the fistula, but a deep pit was left, as an evidence of the impropriety of lancing externally.

Perfectly conscious of numerous imperfections, and want of style and arrangement, and the possible adoption of erroneous views, these remarks are submitted to you. If the latter is the

case, now is the time for correction; and the writer will be but too happy to acknowledge himself in error, if those errors are pointed out, and correct views substituted in their place. He therefore hopes that this may draw forth the views of the members present.

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For the Dental News Letter.

### REMARKS UPON MAKING GOLD PLATE AND SOLDER.

BY B. WOOD, M. D., DENTIST.

MESSRS. EDITORS:—Having recently made some experiments in the way of preparing gold plate and solder, I take the liberty of submitting the result, with the hope that it may elicit further information from some of your readers, who may be more conversant with the working of metals.

*Gold Plate.*—The ordinary alloy of eighteen to twenty, or even twenty-one carats, for gold plate, is liable to objection. In some mouths, it will tarnish, and even corrode. A plate not liable to this, may be made by alloying pure gold with a small proportion of platinum; and for the past few years, this expedient has been resorted to by dentists. Still, the plate thus made is objectionable. If enough platinum is used to give the necessary elasticity, &c., it impairs the color, as well as the susceptibility of receiving a good polish. Besides, the peculiar gray and almost dirty hue is apt to suggest the suspicion that the plate is base. But a few days ago, I was called upon to testify, for a worthy professional brother, to the fineness of the gold used in an artificial set of teeth, the plate of which was alloyed in this way. It appears the patient had exhibited the work to a quack dentist, who, doubtless, because the gold did not, in point of *color*, compare well with his of sixteen or eighteen carat (alloyed with copper and silver) succeeded in making the impression that it was very impure.

The object of my experiment was to obtain a plate which, while as fine as possible, should possess the requisite hardness and elasticity, retain the natural gold color, and be susceptible of the desired polish. The following proportions I find to answer these ends better than any other that I have tried:

By weight: 45 to 50 parts of pure gold.

"	-	2	"	silver.
"	-	$\frac{3}{4}$	"	copper.
"	-	$\frac{1}{4}$	"	platinum.



I first prepare the alloy as follows: platinum, 1 part; copper, 3 parts; silver, 8 parts, (or from 6 to 8 parts.) This forms a very pretty alloy, of a bright silver color, with a yellow tinge. It is quite hard, and of a firm, close structure: malleable, and bears a fine polish. With this, I alloy the gold, to from  $21\frac{1}{2}$  to  $22\frac{1}{2}$  carats, according to the fineness required, (by adding  $2\frac{1}{2}$  or  $1\frac{1}{2}$  parts, as the case may be, to  $21\frac{1}{2}$  or  $22\frac{1}{2}$  of pure gold.)

It may not be known to all of your readers that platinum can be made to unite *directly* with gold, as also with silver and copper, by the heat of the common blow-pipe. Many dentists are in the habit of filing platinum, in order to melt it with gold, and some are under the belief that, even then, it does not really fuse but rather *mixes* with the latter, which has frequently led them to throw away their chippings from the rivets of artificial teeth, lest the presence of such should spoil their plate. Although always satisfied in regard to the actual fusion of platinum with gold, yet I confess, laboring under the impression that, at the ordinary heat, this took place only at the surfaces of contact, and that hence it was necessary the platinum be in a state of minute division, as in the form of filings, in which I used it. Nor was this error corrected, until after trying some quite coarse filings with gold, when, finding this to fuse under the blow-pipe, I tried next rivet chippings, and then larger masses of platinum with the same success. The platinum *amalgamates*, as it were, with the fused metal, in the same way that gold combines with melted tin.

All that is necessary, is to put your scraps to be fused into a depression made in a piece of charcoal, and then apply an intense heat by means of the blow-pipe. In alloying platinum with copper, in this way, it is well to cover in part with another coal, that the copper may not oxydize too soon. In this manner, every one can make his own alloy, and then, if he chooses, send the proper proportions to the goldsmith, for melting and rolling.

I have frequently made inquiries of dentists, (whom I supposed likely to be informed on the subject,) in regard to the mode and proportion of mixing platinum with gold, but without obtaining any thing satisfactory; it may have been from a want of the knowledge sought after, or to a disposition to keep it a "*secret*." In either case, the above hints may not be without value to some

in the profession. At any rate, there are many things which, though they should not prove to be *new*, it is well to bring into notice anew, so that they be not forgotten. A case in point, is the mode of "welding" platina, recently communicated to the profession by Dr. J. Allen, of Cincinnati, but which was performed in the time of M. Delabarre. "In order to accomplish it, he placed a very thin gold plate, twenty carats fine, between the two leaves of platina, fastened them by two rivets, and soldered them by the fusion of the intermediate leaf."\* This is upon the same principle of that published in the *New York Dental Recorder* for February, viz: by *soldering* through the means of gold. And yet, Dr. Allen none the less deserves our thanks for suggesting its application, in uniting together platina fragments, otherwise useless for the purposes in which this metal, as a mass, comes into requisition.

*Gold Solder as Fine as the Plate.*—From various experiments, I find the following answers best in point of color, &c., for the above plate: pure *gold*, 22 parts; *tin*, 1 part; *zinc*, 1 part. This, by annealing, is sufficiently malleable for solder; melts easily enough, and flows well. It will be seen that *it is twenty-two carats fine*.

Judging from a series of experiments in making solder with tin, zinc, brass, copper, &c., I am led to believe that copper adds nothing to the fusibility of the alloys, nor assists in making it flow better. It would seem to be the combination of *zinc* that gives the *flow*.

The advantages of this solder are, 1st, its fineness; 2d, its being of the same standard as the plate used, thereby obviating the galvanic action resulting from a difference in fineness of plate and solder; 3d, it is without the copperish taste so frequently experienced from solder alloyed with copper; and 4th, it has not the hardness which this metal communicates, but on the other hand, can be as easily filed or cut, and leveled off, smoothed, and polished as the plate itself.

I first make an alloy of four parts gold (pure); one tin, and one zinc. This forms a grayish, white, and very brittle mass.

\* *Desirabode's Science and Art of the Dentist*; Dental Library edition, page 430.



Although sixteen carats fine—or as fine as *jewellers' gold*, which some “dentists” use for plate!—it crumbles under the hammer, and melts very readily. Of this, take one part to three of gold, and you have the above.

Nashville, Tenn., June 16th, 1852.

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### LINTOTT ON THE TEETH.

(Continued.)

The *deep portion* of the primitive dental groove, with the exception of a small space at the posterior part, being thus closed in, that *portion nearer the surface of the gum* is still left open, and it serves for the development of all the permanent teeth, with the exception of the anterior molares. It is called the *secondary dental groove*. During the fourteenth and fifteenth weeks, the rudiments of the follicles or *cavities of reserve* of the four permanent incisors, two canines and four bicuspides (the small grinders), are developed immediately to the inner side of the closing opercula of the follicles of the shedding-teeth. As the secondary dental groove closes, these follicular inflections of the mucous membrane are converted into closed cavities of reserve, which recede from the surface of the gum, and lie in close contact with the dental sacs of the shedding-teeth. At about the fifth month, the anterior of these cavities dilate at their lower extremities, and a papilla projects into their fundus, constituting the rudiment of the germ of the permanent tooth. At the same time, opercula are developed at their smaller or proximal extremities, by which they are converted into true dental sacs.

During the fifth month, the posterior part of the *primitive* dental groove, behind the sac of the posterior temporary molar, has remained open. *In it has developed the germ and follicle of the first permanent molar*. Upon the closure of this follicle, by its opercula, a large cavity of reserve is formed in the secondary dental groove, immediately over it, lying in contact with the dental sac of the first permanent molar below, and with the gum above. In this state it remains until the seventh or eighth month after birth; its position, during the intervening period, having been affected only by the pressure backwards of the first

permanent molar, by the temporary teeth, and the sacs of the anterior permanent teeth. At this time, the jaws having sufficiently increased in length to permit the return of the first permanent molar to its proper position, a papilla is developed from the fundus of the cavity, and the dental sac of the second permanent tooth is formed. A portion of the great cavity of reserve still remains, in connection with the superficial side of the sac. As the jaws still increase in length backwards, the dental sac of the second permanent molar descends from the sac of the first, and falls into the same curve. The remainder of the cavity of reserve again dilates for the last time—developes a papilla and sac in the same manner, and forms the *third permanent molar* or wisdom teeth.

*Growth of the Teeth.*—Immediately that the dental follicles have been closed by their opercula, the *pulps* become moulded into the form of the future teeth, and the bases of the molars divided into two or three portions, representing the future fangs. The dental sac is composed of two membranous layers—an internal or vascular layer, and a cellulo-fibrous layer. Upon the closing of the follicle, this membranous structure becomes a *shut sac*, interposed between the pulp which it invests, and the structure of the jaw, to which it is adherent. Its inner surface is free, being separated from the pulp by an intervening cavity. As soon as the moulding of the pulp has commenced, this cavity increases, and becomes filled with a glutinous, granular substance—the *enamel organ*. At the same period (the fourth or fifth month of intra-uterine existence) a thin lamina of ivory is secreted by the pulp, and deposited on its most prominent point. If the tooth be incisor or canine, the secreted layer has the form of a small, hollow cone; if molar, there will be four or five small cones, corresponding with the number of prominent points on the future crown. These cones are united by the secretion of additional layers; the pulp becomes gradually surrounded, and diminishes in size, depositing fresh layers as it retreats, until the bony substance of the body of the tooth and great portion of the fang is completed, and the pulp *proper* of the dental cavity alone remains.

*Eruption.*—The tooth being so far perfected that the fang has attained to the bottom of the socket, its point presses against the



deep surface of the gum; and, assisted by the contraction of that portion of the primitive dental sac which still envelopes it, *bursts through the gum*, and is drawn upwards with a rapidity more than commensurate with the still continued growth of the fang. A space is thus formed at the bottom of the socket, in which the completion of the apex of the fang is speedily effected.

During the progress of these changes, the development of the sponge-like structure already described, the alveolar "process," has been perfected.

Amongst the interesting and extraordinary facts regarding the development of the teeth, which may be elicited from the foregoing account, the following are prominent:

That the human teeth originate from the mucous membrane covering that portion of the embryo which ultimately forms the jaws—

That the process commences at about the sixth week of intra-uterine existence, and extends over the whole period between that and the twenty-first year—

That the manner of development of the deciduous teeth is common to the whole set; but that, as regards the permanent teeth, there is a remarkable peculiarity in the formation of the *anterior permanent molares*, which, although they constitute, perhaps, the most efficient of the permanent set, are nevertheless developed from the *primitive* dental groove, so far partaking of the character of *milk teeth*; whereas, the ten anterior permanent teeth, as well as the two situated behind the anterior permanent molares—namely, the second and third molares—are developed from the *secondary dental groove*—

A striking proof of some peculiarity of formation of the anterior permanent molars, is afforded by the frequency of a simultaneous decay of these four teeth at a very early period—

That, at the earliest stage of development of the ten anterior permanent teeth, they actually occupy a position *nearer the surface* than the germs of the temporary teeth; that, as these last increase in growth, together with the surrounding structures, the rudimentary sacs of the permanent teeth appear to proceed deeper and deeper behind the advancing temporary teeth, until, at the period of eruption of these, and up to the time of their change or shedding, the permanent teeth have attained a position

nearly the reverse of that in which their primary development took place—

That the mode and period of the development of the second and third molares differ from that of the other permanent teeth, the germination of the third being dependent on that of the second, and on the sufficient lengthening backwards of the jaw bones. The tardy appearance of the third molar or wisdom tooth, and its occasional deficiency, are thus accounted for—

That, although during their formation they lie in such close contact, yet the completion of development and growth of the permanent teeth, is independent of the presence of the shedding-teeth, and may be perfected in due time, although the shedding-teeth may have been prematurely removed, provided that, during their removal, no extensive injuries have been inflicted on the *secreting membranes* of the permanent teeth.

*Membranes.*—The limits of this little work do not permit, neither does its object require, a complete enumeration and description of the membranes of the teeth,\* a subject respecting which considerable difference of opinion still prevails amongst the highest authorities.

The permanent teeth of the adult are thirty-two in number, namely :

- 4 Central Incisors.
- 4 Lateral do.
- 4 Cuspidati or Canines.
- 8 Bicuspides.
- 8 Molars Proper.
- 4 Dentes Sapientię.†

\* I am now engaged in the investigation of these structures, and I trust I shall be enabled, at no very distant period, to lay the results before my readers (January, 1841.)

† The last four are, in fact, also molares ; but, from their late appearance in the jaw, and uncertain growth, it is usual to class them separately. In many instances, they will be found in the upper jaw only ; in some, they seem to be altogether wanting, whilst in others, either in consequence of their extreme sluggishness of growth, or imperfect formation, they rise through the gum in such a decayed state as to prove wholly unserviceable. They are seldom visible before the age of eighteen or nineteen, and sometimes their presence is not discovered until a much later date (even so late as fifty or sixty). From the peculiarity of their late appearance, they have been named “*dentes sapientię*”—wisdom teeth—teeth of manhood.



The following table indicates as nearly as possible the periods of eruption of the permanent teeth:

	Years.
The Anterior, or first Permanent Molars, from	6 to 7
Central Incisors	7 to 8
Lateral do	8 to 9
Anterior Bicuspides	9 to 10
Posterior do	10 to 11
Cuspidati	11 to 12
Posterior, or Second Molars	12 to 13
Third Molars, or Dentes Sapientiae	18 to 20

The teeth of the lower jaw commonly precede those of the upper by two or three months.\*

*Position, Form, and Uses of the Permanent Teeth.*—There is a regular gradation in the size, form, and uses of the teeth, from the incisors to the molares; the cuspidati holding a middle place between the incisors and the bicuspides—the last being in every respect intermediate, between the cuspidati and the molares.

*Incisors.*—The incisors, four upper and four lower, are situated centrally in front of the jaw. They are distinguished into “central” and “lateral” incisors. The central, when viewed from the front, are considerably broader, and somewhat longer, than the lateral. When viewed from the side, their form resembles that of a wedge, the cutting-edge being the thinnest part. From the edge, the incisor enlarges gradually as far as the neck, and thence as gradually decreases to the extremity of the root. It has but one simple root, which is nearly round in the upper, and somewhat flattened at the sides in the lower, jaw. The root of the upper central incisor is larger and longer than that of the lateral. Their use, as their name implies, is to cut into, or divide, the food, their action being that of a pair of shears.

\* Derivations of names used to distinguish the teeth:

*Incisor*—*Incisors.*—From the Latin *In*, signifying into, and *scindo*, to cut.

*Cuspidatus*—*Cuspidati.*—From the Latin *Cuspis*, a dart or spear—spear-shaped; called, also, *Canines*, from *Canis*, a dog, in consequence of their resemblance to the tusks of the dog.

*Bicuspis*—*Bicuspides.*—From the Latin *Bis*, twice; and *Cuspis*, double-pointed.

*Molaris*—*Molares.*—From the Latin *Molo*, to grind.

*Dentes Sapientiae.*—Latin signifies, literally, teeth of wisdom.

*Cuspidati* (popularly *Eye-teeth*.)—Next to the lateral incisors, stand the cuspidati, two upper and two lower. The cuspidatus is the strongest tooth in the jaw. The body is not so much flattened as that of the incisor: is pointed in shape—more so in the upper than in the lower jaw—and is covered to a greater extent by the enamel. It is longer than the rest of the teeth, both from the edge or point to the neck, and from the neck to the extremity of the fang, which is single and rather flattened. On each side of the root, a slight groove may generally be traced, indicating an approach to the change which takes place in the root of the next tooth (the bicuspis), viz: a division into two branches. The cuspidati appear to be intended to lay hold of and tear the food.

*Bicuspides*.—The bicuspidates, four upper and four lower—more commonly known as the “small grinders”—stand next behind the cuspidati, two on each side of the jaws. These teeth belong only to the permanent set—the position they occupy in the jaws having been the seat of the anterior and posterior molares of the temporary set. A peculiarity of importance, as regards the regular arrangement of the teeth, attaches to the bicuspidates, viz: they are less in size than the shedding-teeth which preceded them; whereas, all the rest of the teeth making up the adult set, which replace similar teeth of the temporary set, are somewhat larger. This decrease in volume of the bicuspidates, aided by the increased growth of the maxillary bones, counterbalances the difference in the space required by the enlarged anterior teeth of the permanent set, and permits their regular and uniform arrangement. The first or anterior bicuspis, from the edge to the neck, is somewhat smaller than the posterior; but the root is larger, approaching more nearly the length of that of the cuspidatus. On each side is a deep groove, running from a little above the neck to the extreme end of the root, where it forms a complete division into two branches. This is the first positive step in the change from the single to the double-fanged tooth, and is more marked in the upper than the lower jaw. In the posterior bicuspidate, the change is often complete. The body of the bicuspis also approaches the shape and breadth of the molares, terminating in two points (whence its name), the crown of the posterior being wider than that of the anterior. The bicuspidates are used partly in masticating the food.



*Molares*.—The molares (proper) are eight in number: four in the upper, and four in the lower jaw. They stand next behind the bicuspides, two on each side, and far exceed the rest of the teeth in size. The enamel on the grinding surface of these teeth, where they come in contact with their antagonists of the opposite jaw, is much thicker than on the sides, and presents four or five prominent points, with corresponding depressions. These are so arranged that, in closing the jaws, the points of the upper teeth adapt themselves accurately to the depressions and *vice versa*. The molares of the upper jaw have always three roots, and sometimes, but very rarely, four or five, whilst those of the lower jaw are furnished with two only. Of the three roots of the upper molares, two are placed externally as regards the maxillary bone, and are directed straight upwards, nearly parallel with each other. The third root inclines inwards, towards the palate or roof of the mouth. This arrangement of the roots secures to these teeth the firmness required in the discharge of their office of grinding and masticating the food, whilst by their divergence, all interference with the "*antrum maxillare*"—the bony cavity of the cheek—is avoided. The roots of the lower molares run in nearly a straight line downwards. They are flattened at the sides, and somewhat broader than those of the upper jaw.

*Dentes Sapientiæ*.—The four remaining teeth are the wisdom teeth. As regards the body and crown, they are less in size, and more rounded, than the molares (proper). The points and depressions on the surfaces are not so strongly marked: the roots are shorter. In the upper jaw, three, four, or five roots may sometimes be distinctly traced out, but they are generally so far united, as to form, in effect, but one short, cone-shaped root; and when this is the case, the tooth is not so firm, and may be easily displaced. Sometimes, however, the roots are separate and much curved, and then it becomes a matter of difficulty, and requires care and skill to effect its removal with safety. This observation applies more particularly to the wisdom teeth of the lower jaw, where the root generally divides into two or three branches, more or less united, and curving backwards into the more solid portion of the maxillary bone. The use of the *dentes sapientiæ*, is to assist in the process of mastication.

## CHAPTER III.

## ORDINARY DISEASES OF THE TEETH AND GUMS.

*Toothache.*—The immediate cause of this intolerable pain, is *inflammation*. Whether it be induced by cold, by violence, by exposure, by denudation, by pressure on the nerve, or by other effects of decay of the teeth, still, inflammation is the precursor and agent of toothache. What, then, is the course of treatment which naturally recommends itself to our attention? The adoption of all the means in our power: *Firstly*, to prevent the occurrence of inflammation, by keeping the teeth and gums free from all external causes of irritation; and, *secondly*, when pain has supervened, to procure the immediate removal of all such causes.

There are two kinds of toothache, which I am in the habit of distinguishing into *true* and *false*, though both are equally the result of inflammation.

One cause of *false* toothache, is the irritation of the nerves at some point of their course, when, although the actual seat of mischief may be more or less distant, yet, by means of the great sympathetic nerve and its branches, the sensations will be conveyed to the teeth.

Another, and more common cause, is the inflammation of the lining membranes of the root and socket of the teeth, induced either by violent contact with some hard substance, or, as is very frequently the case, by cold. When these membranes become the seat of inflammation, pain closely resembling true toothache is felt; but it is seldom confined to one tooth alone: the pain is general and undecided; the tooth or teeth affected, seem suddenly to have increased in size: for, in closing the mouth, they appear to come in contact with those of the opposite jaw, sooner than the others. This is, in fact, the truth; for the swelling of the two lining membranes, attendant on their inflammation, is sufficient to raise the teeth in their sockets, and cause them to project farther than usual into the mouth.

Many persons, suffering thus from *false* toothache, and falling into the hands of ignorant and unprincipled practitioners, are deprived of a sound and most useful tooth; whilst, if a proper course of treatment had been adopted, such as removal of all irritating causes, followed by some simple means of depletion,



namely, the application of a leech, or free scarification of the gums, or even the administration of a simple aperient—the symptoms complained of would have been speedily subdued.

When *true* toothache has been established, there are several *palliative* remedies which may be successfully employed, before the last resource, extraction, is resorted to. It is with a most unwilling hand that I ever deprive a patient of a tooth, unless it be clearly apparent that the sacrifice of one partly decayed, will materially assist in preserving another, comparatively sound. The loss of a tooth from either jaw, is a matter deserving of far more consideration than is usually bestowed upon it, and should never be incurred without serious reflection.

*Decay of the Teeth.*—The common cause of *true* toothache, is *decay of the body of the tooth*. There is considerable uncertainty and variety of opinion existing as to the manner in which the disease originates. It is an action “*sui-generis*,” the result of some unhealthy affection of the parts forming the bony substance of the teeth. It is certainly not “*gangrene*,” as writers usually term it—at least, if the definition given by the most eminent pathologists be a correct one, by whom *gangrene* is described as “*a state of the parts not absolutely incapable of recovery*.” It commences not, as generally supposed, *upon* the enamel, but immediately *underneath* that layer, upon the face of the bone. It will be remembered that the enamel is composed of crystalline fibres, nearly indestructible, and consequently insusceptible of decay.

My own opinion with regard to the formation of decay, is founded upon the endosmotic phenomena which I suppose to be taking place in the structure of the tooth. Thus, as no blood-vessels are traceable into the texture of the ivory, I conceive that the animal part of this structure derives its nutrition from the colorless liquor-sanguines, imbibed by the tubuli, from the vessels of the pulp. This mode of nutrition is seen in various of the tissues of the body, as, for instance, in the cartilage, in the cornea, &c. That the tissue of the tooth is imbued with fluid, is evident, from its solidity and color, and also from its difference of weight in the fresh and dried state. This fact may easily be illustrated, by immersing a dried tooth in water, when it is observed to absorb a considerable proportion of the water, and become materially changed in its density.

Now, I think I am warranted in inferring that the nature of the fluid permeating the tooth from the vessels of the pulp, is, in the normal state of the system, always similar.

On the other hand, the crown of the tooth may be regarded as being immersed in the salivary fluid by which it is constantly surrounded; and, as we know, this fluid undergoes a change from alkaline to acid, by simple exposure to the influence of the atmospheric air within the mouth. Again, from containing a large proportion of nitrogen, the saliva is constantly subject to a change in character from decomposition; and, lastly, the fluids of the mouth are obviously very much affected, by the state of the stomach, and disease of various kinds.

Now, in the above statement, we have the precise conditions which are best calculated to induce an active endosmosis; an alkaline fluid contained within the tubular texture of the tooth, an acid fluid externally, the two being separated by an animal tissue. To question the existence of endosmosis, under such circumstances, would be to dispute the first principles of physiological science. But what, asks my reader, are the results which I deduce from my position? They are important, and the following: In the first place, it is by this process that the color of the teeth is altered in disease; that they become yellow and discolored during illness, by the transudation or endosmosis of discolored and morbid fluids. And by the same process, they are capable of regaining perfectly their original and wonted whiteness.

Secondly, I regard this endosmosis as the means by which the calcareous matters are first dissolved and, secondly, removed in a state of solution from the tubuli, leaving behind only the animal texture of the ivory, and thus establishing decay. I may be asked why, admitting my proposition, the decay should be localized to a single spot? Why should not all the tubes be affected similarly and simultaneously? My reply is, that the part most likely to be attacked, and that which, under the above circumstances, I believe to be affected, is one which is already placed in a morbid condition, either by imperfection of development, or injury to the tubular structure from pressure, &c.

The first indication of the existence of decay of the ivory of the tooth, is a slight discoloration, which is perceptible through the semi-transparent enamel.



Decay progresses much more rapidly in some individuals than in others. The bone becomes softened by the removal of the earthy or calcareous part, leaving the organic or animal part behind, and is destroyed in a direct line from the surface, towards the centre of the tooth, in the course of the tubuli. The base on which the enamel rested, is thus removed: some accidental pressure in masticating bears upon the spot, the enamel breaks down, and a cavity is suddenly found to exist in what had probably hitherto been deemed, by the unsuspecting owner, to be a sound tooth.

If the disease has proceeded far towards the centre, the dental cavity becomes partly or entirely exposed, inflammation of the lining membrane and pulp takes place, and *true* toothache is the immediate result.

Decay makes its appearance most frequently beneath the grinding surfaces of the molares, and on the sides of the teeth, where they come in contact with their neighbors, or where they are so formed as to offer a favorable lodgment for portions of the food. It also occasionally attacks the neck of the teeth, but is scarcely ever found on the roots.

Having once established itself, its destructive effects on the ivory of the tooth are extremely rapid: the enamel, losing its support, crumbles away, piece by piece, until the roots alone remain; the vitality of the whole of the ivory being then extinct, the disease appears to have expended itself; for the roots, though dead and extraneous bodies, *as regards the ivory*, will remain firm for years in the gums and alveolar cavities, affording a considerable degree of support to the adjoining teeth, and whilst in this state, they should on no account be disturbed.

It must have attracted the attention of every practical dentist, as well as of myself, that one situation in the tooth is remarkably subject to decay. I allude to the deep groove which exists upon the surface of the crown of the molares, and forms the line of separation between the tubercles. The first indications of decay are almost constantly perceived in this situation, and in the course of a groove which is frequently found on the outer side of the lower jaw.

In reasoning upon the probable cause of the frequency of decay

in these situations, I was at first led to infer that the diseased action must depend upon the collection of fluids, and upon the decomposition of alimentary matter in these grooves. But I must confess that this explanation, although undoubtedly partly applicable to the morbid process, was far from satisfactory, when I reflected that the decay occurred as frequently in the teeth of the upper, as of the lower jaw; that it affected several teeth simultaneously, and was not unfrequently absent in the lower, while it was present in the upper teeth.

Finding, from repeated observation, that in teeth affected in the manner above described, the structure of the enamel was unnaturally brittle, and that the disease followed very accurately the line of the depressions of the crown, I was led to the opinion that the extreme susceptibility to diseased action, must depend upon defective formation in this part of the tooth; and farther investigation has served to convince me that this is really the case.

The mode of formation and growth of the tooth described by Mr. Goodsir, throws considerable light on this point, and affords an explanation of the phenomenon, which, to my mind, is perfectly satisfactory.

By referring to Mr. Goodsir's explanation of the production of the form of the upper surface of the crown of the tooth, it will be seen that this depends upon the development of a number of opercular processes, corresponding with the number of the tubercles of the tooth. These opercula meet at a line corresponding with the future groove upon the crown, and at this point become joined and continuous with each other, so as to constitute a single membrane, by the vessels of which the enamel fibres are secreted. Now, if we suppose these opercula, in consequence of interference in development, to approximate only partially and imperfectly, or to unite and form a cicatrix, insufficiently supplied with blood-vessels, the natural consequence must be an improperly-formed enamel, and one susceptible of the chemical influence of the decomposing fluids lying in contact with it, and imbibed into its texture.

Such, in my opinion, is the real cause of decay so constantly happening in the situation referred to—a morbid process, which, it will be observed, differs from the ordinary course of disease, by



commencing in the enamel, and thence extending to the ivory, and not, as is usually the case, affecting first the ivory, and secondarily, involving the enamel.

The cementum or cortex of the root, secreted by the periosteum (or investing membrane), is endowed with a higher degree of vitality, and is more nearly analagous to the true bone, than the ivory. It is nourished, not by the vessels of the pulp, but by those of the investing membrane, and is consequently not so immediately affected by the death and decomposition of the less highly-organised structure. Every practical dentist who uses his powers of observation, as well as those of extraction, will bear me out in this assertion, that on the removal of a fang, which has remained for some time after the loss of the crown of the tooth, the cementum will be found comparatively sound, whilst nearly the whole of the ivory has been decomposed. This fact accounts for the length of time during which a fang may be usefully retained after destruction of the crown.

During the period that the fangs are allowed to remain, nature is employing means whereby she may rid herself of the presence of the remains of the decayed organ. Absorption of the gum, the alveolus, and of the root itself, is gradually taking place, whilst, at the same time, a depositon of bone is going on at the bottom of the alveolar cavity, which, by degrees, forces the remainder of the root from its socket, until it lies embedded only in the gum, or on its surface, and by the adhesion of the latter, is alone retained. As soon as this absorption has advanced so far as to render the roots loose, *they should be removed*, as their longer retention is not only useless, but is attended by constant and extensive irritation of the gums and sockets, and not unfrequently by abscess and other very painful affections. The operation for their removal is simple, easy, and productive of little or no pain. It is only when stumps are firm, and *ought to be retained*, that the uncalled-for cruelty of "*punching them out*," is perpetrated.

The decay of the body of a tooth is not always accompanied by pain. I have had patients under my care, who, although they had lost several teeth in this manner, yet assured me that they had never, within their recollection, suffered any pain in them; and I have also been enabled, at once, to fill up large

cavities, in such cases, when I could not have done so, had the teeth possessed their usual sensibility, without some previous preparation. In these cases, I conceive that the decay was so gradual and progressive, as to have been unattended with irritation to the pulp and membranes of the socket, and that the pulps were not endowed with the same degree of exquisite sensibility so remarkable in most persons, but particularly in those of a nervous and sanguine temperament.

*Exciting Causes of Decay.*—There are, doubtless, certain peculiarities inherent in the constitution of individuals, which, exerting a morbid influence on the primary development of the teeth, render them less able to withstand the attack of decay, and perhaps lay the foundation for its origin. In what other manner can the defective state of these organs, which is so frequently common to all the members of a family, be accounted for?

The ordinary diseases of infancy, as well as some of the remedial means employed, especially *mercury*, exercise a very prejudicial effect on the future constitution of the teeth. The too free exhibition of mercury, at any period of life, is followed by most injurious results, both to the teeth and to the structures in their immediate neighborhood.\*

*Mechanical Injuries.*—Mechanical injuries also tend toward the destruction of the teeth. By mechanical injuries, I mean the cracking or breaking off of a portion of enamel, by bringing the teeth into too violent contact with each other, or with any hard substance. The practice of biting thread, or of using the teeth as a vice, for instance, is especially to be avoided. To this class of injuries may well be added the most absurd and unjustifiable practice of separating the teeth by the *free use* of the file, when they happen to appear rather crowded in the jaw. The use of *deleterious tooth-powders*, so plentifully and unhesitatingly offered, as a means of “*whitening and preserving*” the teeth, is

\* I have in my possession, a portion (fully two-thirds) of the jaw of a child, aged three years, the removal of which became necessary, in consequence of extensive necrosis of the bone. I learned from the mother of the child, that during an attack of measles, it had been brought into an extreme state of salivation. There can be little or no doubt that, in this case, mercury caused those actions which here terminated in necrosis.



another very active excitant cause of decay. Most of these empirical compounds contain some powerful acid, which, whilst it "*whitens*" the teeth, destroys their protective coating of enamel, and leaves the bony substance an exposed and easy prey to its numerous enemies.

*Unequal Lateral Pressure.*—Many cases which have fallen under my observation, have strongly influenced me in the *supposition* that the mutual pressure exercised by the angle of one tooth upon another, may, when carried to any extent, become an immediate excitant of decay. The infrequency of a decayed state of the incisors of the lower jaw, which are often pressed into very close contact, will perhaps be adduced as an argument against this idea; but it must be remembered that, in such cases, the pressure of the teeth is general and equal over the whole of the lateral surface; and, consequently, that the transudation of the fluids within the ivory is no more materially affected by it, than is that of a limb which has been carefully and equally bandaged from one extremity to the other. But, in the case of severe and continuous pressure of one point upon another, I conceive that the nutritive function of the tubes may be interfered with and prevented, so that the action necessary to the vitality of the ivory being interrupted, death of so much of it as comes within the influence of the pressure, ensues, and diseased action is set up in the remaining portion: thus decay is engendered, and the mischief proceeds, until the enamel, no longer strong enough to resist, gives way, and a cavity is found in either tooth, exactly beneath the spot where the chief point of contact existed. Or, it may be an endeavor, on the part of nature, to avoid the pressure, by establishing a new process, viz: absorption or removal of the calcareous matter of the part pressed upon—consequent softening—subsequent breaking down of enamel—and successive continuation of the malady.

Be this as it may, I have no doubt that *unequal lateral pressure* is amongst the principal of the exciting causes of decay, and is another reason for early and proper attention to the teeth. The inorganic nature, and consequent insusceptibility of the enamel, are quite sufficient to upset the popular belief that decay is, or can be, communicated from one tooth to another. How, then, are we to account for the decay that is so constantly

found to exist between two teeth, in such close contact, that a lodgment of food cannot have been the cause, unless we allow that an undue degree of pressure has produced it? If its origin be spontaneous, why should it not appear upon either face of the tooth?

There are other more remote exciting causes of decay, which, as arising from an unhealthy condition of the gums, will be noticed in connection with that subject. The most popular supposition with regard to the origin of decay is, that it results from the lodgment and decomposition of particles of food between the teeth, and upon the inequalities of their surfaces.

(To be continued.)

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For the Dental News Letter.

#### REMARKS ON ATMOSPHERIC PLATES.

BY T. L. BUCKINGHAM, M. D., DENTIST.

Recently, there has been much discussion respecting the use of the cavity or chamber in plates. Various opinions have been expressed, some approving, others disapproving, of its use. Some consider it the best method of inserting full upper sets of artificial teeth, and have adopted it not only in these cases, but in some partial sets also, while others are as strongly opposed to it. They think that, instead of its being an advantage, it is a disadvantage; that, although it will assist to hold up a plate at first, the cavity soon becomes filled by the congested vessels, and then, instead of assisting to keep the plate in its place, it only tends to displace it.

We propose, in this article, to attempt to explain the manner in which it acts, and answer some of the objections made to its use. We own we are its advocate: we have used it in numerous instances, and do not know how we could get along without it, unless something can be discovered that will answer better. We are certainly not disposed, at present, to go back to the old mode of making plates, no wider than will cover the alveolar ridge, and compel the wearers to keep their teeth closed while they talk, and hold them up with their tongue when they want to take any thing into the mouth.

We will first state that the same depth of cavity will not suit for all cases. For a soft, spongy mouth, the cavity should be



deeper than for one that is hard and unyielding. In the first, the mucous membrane will bear stretching to a considerable extent, without producing irritation; in the other, if the cavity is deep, there will be a constant vacuum, which will produce so much strain upon it, as to cause a very unpleasant, if not ultimately an injurious, effect. It is not at all uncommon to find mouths in which the mucous membrane has been disrupted, by the constant pressure made upon it, and an abnormal growth of tissue filling the cavity entirely up, which prevents it from being of any further use.

We never make a cavity deeper than the mucous membrane will stretch and fill up, without irritation, depending upon the elasticity of the vessels to hold it in its place; for, it takes as much pressure to keep the vessels congested, as it did to congest them at first, unless they have become permanently enlarged, which is seldom the case, if there has not been too much strain upon them.

The question is asked in the January number of the "American Journal of Dental Science," how we "explain, upon scientific principles, how a partial vacuum can be obtained?" That a partial vacuum can be produced in the mouth, we suppose nobody will doubt. Every time we inspire, or every time we drink, (unless it is when the head is thrown back, and the fluid poured into the mouth,) proves that there is a vacuum, and the air or fluid rushes in to fill it. But this is not vacuum enough to be of any benefit to us; we can produce a greater vacuum by what we term "suction."

If we take a tube, closed at one end, and put the open end in the mouth, close the lips and nostrils, then, by the action of the thoracic muscles, produce a partial vacuum in the chest, a portion of the air in the mouth rushes into the lungs, to establish an equilibrium. This is what is termed suction. Now, if the tongue be pressed on the open end of the tube, so as to close it, and the air admitted into the mouth, the tube will stick to the tongue, and it will require a considerable effort to pull it off. This, every child of five years of age has done a hundred times with its mother's keys or thimble; and this is vacuum enough for our purpose. It is not equal to fifteen pounds to the square inch, we admit; nor, perhaps, one-fifth of it. Fifteen pounds to the

square inch would tear the mucous membrane from the palatine bones; it would cause the blood to ooze out through the pores of the skin. The thickest part of a bullock's hide would hardly bear it, over any extent of surface; and yet we talk about applying that amount of pressure to the delicate membrane in a lady's mouth! Fifteen pounds is nearly a perfect vacuum at the level of the sea. This is more than we can obtain with an air-pump; for, there must always be air enough left in the receiver to work the valves, even if we allow nothing for leakage.

That we can produce a partial vacuum in the mouth being proved, the question is asked, "How does the air get out of the chamber without having a valve in it?" It would have been much more difficult to answer, had it been asked how it could be "kept in." If we take an India rubber bag, and tie the mouth so as to prevent the escape of the air it contains, then place it under the receiver of an air-pump, and exhaust the air from the receiver, the bag will swell up to several times its ordinary size. If, in the place of an India rubber bag, we take a glass bottle, and cork it up tight, and place it under the receiver, the bottle, unless it is very strong, will be broken to pieces: for, the pressure of the air on the inside, is equal to the pressure taken off the outside. But how does the air get out from under the plate? We make a partial vacuum in the mouth; in doing which, the teeth are held some distance apart; the cheeks are pressed down upon the artificial teeth, which loosens them from the gum; then the air rushes out from under the plate, to establish an equilibrium with the air that is in the mouth and lungs. Just before the air is admitted into the mouth, the plate is pressed firmly against the roof, with the tongue, and held there. If the plate fits perfectly around the edges, the air is prevented from getting into the chamber; and by the pressure of the atmosphere on the outside, it is made to adhere firmly to its place.

Now that we have explained, or at least attempted to do so, how we get a vacuum in the chamber, we will say a few words on the chambers generally in use.

There are but three or four kinds of chambers which we think necessary to examine at present; all the others have either been abandoned, or are used so seldom, that we will not mention them here. The first we propose to notice, is made by enlarging the



rugæ of the mouth, or sometimes by making a number of small chambers in the plate, about the size of half a pea, without regard to locality. With this kind of chamber, we have not succeeded very well, although others continue to use them, and in some cases, prefer them to all others. In our cases, we have found that, unless the edges of the plate fit perfectly, the air would creep in at some place, and destroy the adhesion. It is almost impossible to make those portions of the plate, between the chambers, fit so perfectly as to isolate each chamber. If this is not done, and we have to depend upon the edges of the plate to exclude the air, we can see no advantage possessed by this kind over one large chamber.

The next is Dr. Flagg's. This, we have also used, but without much success, finding the difficulty attending it which might have been expected from its position. The cavities are formed on the top of the alveolar ridge—the place, above all others, on which the plate should press in masticating. If we make a chamber here, on each side, “about one inch in length, by three-eighths in width, and one-tenth in depth,” as the Doctor proposes, the plate forms a wedge-shaped cup, down the sides of which the gums are forced every time pressure is made upon it. The whole pressure comes upon the alveolar and maxillary bones on the outside, and the maxillary and palatine bones on the inside, and not upon the alveolar ridge; and we all know that an inclined plane will produce a greater pressure than the same amount of force applied in a direct line on a plain surface.

Dr. Cleavland's is the next to be noticed. This is made by striking up a plate to fit a cast of the mouth; an opening is then cut in the centre, varying from the size of a dime to that of a quarter of a dollar. Over this plate, and about an eighth of an inch from it, another plate is fitted, which meets the first as it rises on the alveolar ridge. Here, the plates are soldered together; this makes a very smooth and pleasant surface for the tongue. These chambers are much larger on the inside than they are at the opening; this allows the gum, when it is forced up into the chamber, to curl over the edge of the plate. There is no doubt about this chamber holding a plate firm; but the edge of the plate irritates the gum so much as to keep it constantly sore. In addition to this, the shape of the chamber pre-

cludes the possibility of keeping it clean, and it becomes very offensive. To remedy this objection, a band is sometimes inserted around the external opening, and soldered to the plates. This makes a chamber exactly like Gilbert's, with an acute edge; this sharp edge always keeps the gum sore. We have seen several cases where this chamber has been worn for some length of time, and they all presented the same appearance, namely: a ring of inflammation upon the gum, which, in some cases, extended over the whole roof of the mouth.

In inserting artificial teeth, we should produce as little irritation as possible. It is bad enough to be compelled to wear them, without having the mouth constantly sore. This chamber will hold a plate firmer than any other we know of. If the plate fits close around the edge of the chamber, it matters very little whether it fits in other places or not. It is like a dry cup on some soft part: pull it in any direction you please, it still adheres.

The last chamber we will notice, is Gilbert's. This kind has been used in more cases than any other we know of, and has generally given more satisfaction. In his application for a patent, Gilbert specifies no size or shape, but claims as follows: "The plate being made single, and a chamber being sunk in the central part of the upper surface of the plate, in which a vacuum can be formed by the tongue." Whether Mr. Gilbert was the first to use this kind of a chamber, we do not know; but this we do know: that as soon as he made known to the profession that he had taken out a patent, many others, in all parts of the country, claimed to have used the same thing years before. This may appear strange to those out of the profession; but, when they consider that every invention that has been made in dentistry, has had at least a dozen claimants, they must conclude that every dentist is a genius, and the only reason his inventions have not been brought before the profession, is because he has not had time or opportunity—or, perhaps, he has not quite completed them! for, make what you will, and show it to all you meet, you will find they have all used, or thought of it, years before.

As we have stated before, this chamber should not be always made of the same depth. We sometimes make it with abrupt edges, by driving the edge down with a punch (but never make it sharp enough to cut); in other cases, the chamber gradually



diminishes in depth from the centre to the edge. The only rules we have to govern us is, first, not to make the edges of the chamber sharp enough to irritate the gum, and next, to make the cavity no deeper than the mucous membrane will fill up without producing inflammation.

When we insert artificial teeth, we should not try how great a weight we can make them sustain without falling, but to give the most satisfaction and comfort to our patients. To do this, it is not necessary that it should take fifteen or twenty pounds to displace them. All that is required, is that they shall adhere tight enough to prevent them from falling when the mouth is opened. If they do this, and the teeth are articulated properly with the under teeth, there is very little danger of their coming down in mastication, after the patient has worn them a short time.

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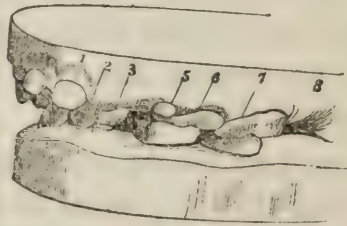
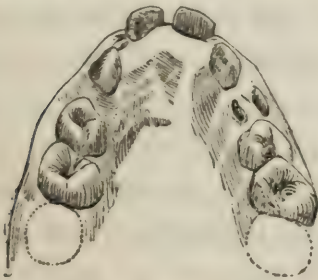
For the Dental News Letter.

### THE AZTEC CHILDREN.

BY J. D. WHITE, M. D., DENTIST.

MESSRS. JONES, WHITE & M'CURDY—*Gentlemen*: Doubtless, a description of the teeth of the remarkable specimens of humanity, now on exhibition in our city, known as the "Aztec Children," would not be uninteresting to your numerous readers and the profession generally; therefore, the accompanying plaster casts, which I have been permitted to obtain, of their mouths, through the politeness and aid of my friend, and their attending physician, Professor J. K. Mitchell, together with this short description, is at your disposal. Although there are no distinctive features about the formation of their jaws or teeth, which can lead to fixing them to any peculiar race of beings, still, to know that they bear a strong resemblance to our own race, is of more or less interest to all. The narrative published concerning them, declares them to be "the surviving remnant of an ancient and singular order of priesthood, called Kaanas, which, it was distinctly asserted, in their annals and traditions, had accompanied the first immigration of this people from the Assyrian plains. Their peculiar and strongly distinctive lineaments, it is now perfectly well ascertained, are to be traced in many of the sculptured monuments of the Central America ruins, and were found still more abundantly on those of Iximaya. Forbidden by inviolably

sacred laws from intermarrying with any persons but those of their own caste, they have dwindled down, in the course of many centuries, to a few insignificant individuals, diminutive in stature, and imbecile in intellect." That this account may or may not be hypothetical, is no concern of ours at present. They certainly fill the mind with a peculiar interest, to behold their *unique* appearance. Their systems have rather reasonable proportions, though diminutive in stature, except their faces, which seem to be rather large in proportion to their heads, bodies, and limbs. The little girl, "*Bartola*," has all her teeth of the first set, twenty in number, except one left inferior lateral incisor, which either has been extracted or dropped out, as there is space sufficient to have accommodated a tooth of the same size of the three inferior incisors remaining. Her jaw is well formed, and teeth as regularly set as the average of other children having the first set of teeth. The jaws also antagonize or articulate well.



The teeth are so much, in their general appearance, like the deciduous teeth of children of our own race, that they could not be separated from them, except that they seem to be a little smaller than the average. She has not only the same number (twenty) that belong to the deciduous teeth, but also the same classes are represented, namely: four incisors, two cuspidati, and four molares, in each jaw. The gum shows some swelling or fulness, as if the first molares of the second set were about to permeate the gums. The boy's, "*Maximo*," presents much more interest, inasmuch as his teeth are shedding. The accompanying cut will show, from the position and character of the spaces left, that he has also had twenty teeth in the first set.

It will be perceived that the superior front incisors are about

*Description of Plate.*—1. Front Permanent Incisor; 2. Space for Permanent Lateral Incisor; 3. Canine of Temporary Teeth; 5. First Bicuspis; 6. Second Deciduous Molares; 7. First Permanent Molares; 8. Second Permanent Molares Erupting.



half erupted, and are well formed, and of medium size, by comparing them with front teeth of our race. I have taken the pains to measure the breadth of a number of front teeth of adults, to ascertain how nearly they will correspond, and I find that the teeth of some individuals of large size, measure less than Maximo's. It is true that a number are much broader; still, the size of his teeth indicate that they were intended for a much larger being than he will likely ever be, and that they are not out of the range of the size of the teeth of a large and well-developed race. In the space of the right side, a lateral of the second set is making its appearance; next to this, and the space opposite, the deciduous cuspidati still remain; back of which, we have the spaces where the first molares of the first set have been lost, and on the left side a *bicuspid* is making its appearance. This is the natural order of the eruption of those teeth. It is usual, where there is no intermeddling by dentists, or loss of teeth by decay, that the bicuspides are cut before the canines. Farther back is the second deciduous molares, well developed, and of the average size. The next in order, is the first of the molares of the second set; they are also well developed and sound, and so nearly resemble our own teeth, in size and configuration, that they could be mistaken for the teeth of our race.

A description of the inferior jaw will scarcely be necessary, except that there are only two front incisors, close alongside of which are the canines, or teeth resembling that class, making their appearance; back of which, on the right side, there is a considerable space, from which teeth have been lost, and the gum presents the usual fulness preceding the eruption of a tooth; and back of the space on the left side, there is one of the first molares still remaining. Immediately in the rear of this, we have the first molares of the second set, which are large and well formed. Back of the first molares of both jaws, the second permanent molares are swelling the gums, as if they will also soon make their appearance. The articulation of Maximo's jaws are not so good as Bartola's—the upper jaw projecting over the lower; but it will be observed that the lower maxilla is somewhat shortened by a loss, apparently for a long time, of the first teeth, between the front incisors and the second molares; while in the upper jaw, that shortening does not obtain, as some of the teeth of

the first set are yet in ; and where they have been lost, the second set are making their appearance in such a way—one behind the other—as to make the upper jaw necessarily more projecting than the lower. This is a condition of things which is very frequently observed in other children ; and when both jaws have the same number of teeth erupted, they will be more equal in length. The supposition that this will be the case here, is favored by the fact that the permanent molares of both jaws articulate properly, one with the other. There is nothing observable in the peculiar anatomical formations of any of those teeth which would distinguish them from the teeth of our own race. With regard to their respective ages, of course it will be difficult to arrive at any positive conclusion. However, as the faces of these children are well formed, and of rather large size, it does not seem probable that the teeth have partaken of the same stunted growth that has governed their systems generally. And, again, as the teeth are of full size, and present good enamel, as if they had been well supplied with nutrition, and are shedding according to the usual order which mark the periods of shedding and eruption of the teeth of our own race, that such changes would most likely take place in the one at about the same time that it would in the other.

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*Saponaceous Dentifrice.*—A new and agreeable preparation for cleansing the teeth is beginning to be extensively manufactured by Mr. E. Davis, of Cambridge, Mass. The brush being slightly drawn over the cake, produces a lather of the richness and flavor of cream in the mouth, at the same time thoroughly and effectually accomplishing all that can be desired in cleansing the teeth and gums. This compound is free from the objections urged against the use of some powders, which grind and scratch the enamel, and particles of which work themselves in between the neck of the tooth and the socket, leading to serious results. Mr. Davis has been careful to mix nothing that could possibly act upon the lime of the teeth, and all acids therefore are avoided. We are quite sure this dental soap, for such it really is, will have the approbation of all the dentists ; and if so, it must obviously become a universally favorite article.—*Boston Medical and Surgical Journal.*



# THE DENTAL NEWS LETTER.

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JULY, 1852.

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*This number* completes the fifth volume of the News Letter. With this issue will be found an index to fourth and fifth volumes, which can now be bound together, making a volume of over *four hundred pages*.

We expect to continue our publication the same size as this number, and hope to be aided by the contributions of *new*, as well as by the continued efforts of *old* correspondents. By this means we will be enabled to give increased interest to our pages, and to secure, what we are ambitious to deserve, the reputation of publishing a useful dental journal.

Our aim has been to give variety, and that of the right sort; and that all the matter should be purely of a professional character, and of general interest. And we have striven also, as our pages will testify, to draw out the native talent in the profession, by appeals to their ability and professional pride. How far we have succeeded we leave our readers to judge.

For the future we promise a continuance of the same efforts, and shall, as heretofore, avoid all unprofitable and personal controversies; but follow the "even tenor of our way," using our best efforts to advance the interests of the profession.

This is our "*platform*;" and we would, therefore, again invoke the co-operation of all those who approve of our course—who love their profession, and who desire increased usefulness to the "*Dental News Letter*."

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We receive many letters without the name of the State on them, and are consequently left to decipher the post office stamp on the envelope to find out the State, and as this cannot always be done with certainty, owing to the very imperfect and indistinct manner in which the stamp is put on, we would therefore suggest that the writer give *town*, *county* and *state* at the head of his letter, which will relieve us at once of the difficulty.

*First Annual Announcement of the Philadelphia College of Dental Surgery.*—For years we have spoken of Philadelphia as a place peculiarly favorable for the location of a Dental College—not that the profession resident there were particularly in need of instruction, for we think they will compare favorably with those of any other place on this continent—but because of its peculiar advantages in location; and especially on account of the great number of medical students who congregate there during the lecture season, *many* of whom we think would, as they *all* should, acquaint themselves, to some extent at least, with the various operations in dentistry, because of its intimate connection with the profession of medicine. Philadelphia has justly been styled the “Mecca” in medicine, and we see no reason why it should not have the same reputation with reference to dentistry.

From the well known character and ability of the faculty, and the many facilities offered, we can safely promise full and efficient instruction from each chair, and a sincere regard on the part of the professors for the advancement of the students.

We refer the reader to second page of cover for advertisement.

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*Medico-Dental Education.*—We have just received a short but ably written paper on this subject, published in the shape of an extra of the “Nashville Journal of Medicine and Surgery.” By B. WOOD, M. D., dentist.

From the hasty glance we have given it, we have discovered that the author is in favor of “teaching it (dentistry) as a branch of medicine in an adjunct or supplementary department of medical colleges,” arguing for the necessity of a thorough medical education.

In a previous number we gave our views somewhat on this subject, which still remain unchanged. However, we desire to see the matter freely discussed in the same spirit as is manifested in the article now under notice, that the best method for a thorough dental education may be brought forward and adopted.

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*An Acrostic.*—We have received, from a correspondent, an acrostic on the words “Dental News Letter,” which, though good in sentiment, is somewhat lame in expression and in poetry. We deem it best to withhold it.



*Dental Monitor*.—This is a little paper published by Dr. F. Y. CLARK, Griffin, Ga. It contains (as the phrase goes) much of interest to the general reader.

We must find fault with the editor, however, in neglecting to give credit to the authors and periodicals from which he has copied some of his matter. For instance, the article on "Artistic Dentistry," by Dr. A. Hill, has no author's name attached; and the "Curiosities of Dentistry," written for and published by the News Letter, is not credited to us. We presume, however, these were simply oversights.

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#### BUSINESS NOTICES.

*Removals*.—We have removed our Philadelphia establishment from No. 120 to No. 116 Arch, or Mulberry street. Also our Boston establishment from No. 23 to No. 3½ Tremont Row. Of course these removals add greatly to our facilities in affording additional room and conveniences.

Our correspondents will please notice the changes in location, when addressing us at either of the above places.

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#### NEW AGENTS.

C. W. & H. R. J. Long, Druggists, Athens, Ga.

L. T. Lazell, Druggist, Worcester, Mass.

JONES, WHITE & M'CURDY.

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*Economy in Dental Operations*.—A farmer of the neighborhood of Boulogne, in France, applied the other day to a dentist of that city, and complained of severe pain in a decayed tooth. The dentist told him that the tooth would bear stopping with lead, and asked him to return in a few days. When the farmer had returned home, he thought he might save the dentist's fee, and asked the blacksmith of the village to pour some melted lead into the tooth. The worthy knight of the anvil did as he was bid, and the poor farmer saved his money, but had almost the whole of one side of his jaw burnt away.—*London Lancet*.

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*Excision of half the lower jaw*.—In the theatre of the Belfast General Hospital, Dr. Moore skilfully performed this operation in the presence of a large number of the profession. The patient, who is a Prussian, is going on remarkably well.—*London Lancet*.

*Chloroform.*—Dr. Snow, who so frequently administers chloroform in this metropolis, has lately read a paper before the Medical Society of London, in which he states:

“When dogs, cats or rabbits were made to breathe air containing from three to five per cent. of vapor of chloroform till they died—a process which occupied generally from ten to fifteen minutes—the heart continued to act for a minute or so after breathing had ceased, as he had ascertained by means of the stethoscope; and then, in some instances, the animal gave a few gasping inspirations, about the time when the heart was ceasing to act, which had the effect of restoring it to life. On the other hand, when such animals were made to breathe air containing eight per cent., or more, of the vapor, *death took place very suddenly*, the respiration and the heart’s action ceasing together.

\* \* \* \* He believed that no accident had occurred from the continued exhibition of chloroform vapor, *well diluted with air*, (the italics are our own.) In the fatal cases which had happened, death had taken place suddenly by way of syncope, showing that the heart had been paralyzed by the action of vapor constituting not less than eight or ten per cent. of the air inspired just before death. \* \* \* \* There were two methods of ensuring the dilution of vapor of chloroform with atmospheric air, to such an extent that death could not occur without giving sufficient warning to allow of accidents being prevented by ordinary attention and skill. The first and best of these methods was, to exhibit pure chloroform by means of a suitable inhaler; the other method was to dilute the chloroform with rectified spirit of wine, before pouring it on a handkerchief or sponge. Equal parts, by measure, of each, is the proportion which Dr. Snow is in the habit of using; and he thinks that the best means to be employed, in case of impending death from chloroform, is *artificial respiration*.—*London Lancet*.

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*Progress of Dental Science.*—Dr. Parmly’s lecture before the graduating class of the Baltimore College of Dental Surgery, is a clear, energetic performance. He is extremely severe upon Dr. Trenor, of New York, who seems to have given mortal offence by his comments on dental education. When professional brethren fall out among themselves, the public find a difficulty in



deciding who is in the wrong. Dr. Parmly is determined to uphold the dignity of his profession, and he will not yield an inch of ground to any man. That the dental institutions are serviceable in diffusing improvements and science, and in educating men to be useful, admits of no denial. Dr. Trenor, therefore, or any other champion for the old system, under which dental operators acquired their knowledge, as apprentices to mechanics learn a trade, cannot shake the faith of Dr. Parmly in the utility of colleges, and especially the one in Baltimore. In this we coincide with Dr. Parmley, from knowing some of the gentlemen who give courses of instruction there. It is quite useless to object to any system which qualifies us for bettering the physical condition of men and women. Dentistry is an essential branch of business in every community in this country. Whatever adds to the qualifications of dentists, either mentally, morally, or in the scientific and mechanical department of their profession, should be sustained and encouraged. We are of the law and order party, and believe these colleges will ensure to the community good dentists.—*Boston Medical and Surgical Journal*.

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From the London Lancet.

DEATH FROM HEMORRHAGE CONSEQUENT UPON LANCING  
THE GUMS.

*To the Editor of the Lancet:*—Sir—An infant was brought to me one morning, suffering from high fever and profuse diarrhœa, the consequence of a dry, hot, and swollen state of the gums during dentition. I scarified the gums, and the infant was taken home. Late in the evening the father called on me, stating that early in the afternoon the mother noticed some blood proceeding from the child's gums, and that as the day advanced, the flow of blood continued to increase. I gave him some styptic, and desired him to let me know its effect. At midnight I was sent for to visit the case, and found blood freely oozing from every part of the scarified surfaces. I tried pressure, and finding it and other means ineffectual, applied the actual cautery, but in vain. The infant died at 7 A. M., twenty-one hours after the scarification.

I am, sir, your obedient servant,

HENRY WHITWORTH, M. D.

St. Agnes, near Truro.

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